UNITED NATIONS

A

General Assembly

Distr.
GENERAL

A/CONF.151/PC/6
27 June 1990

ORIGINAL: ENGLISH

PREPARATORY COMMITTEE FOR THE
UNITED NATIONS CONFERENCE ON
ENVIRONMENT AND DEVELOPMENT
First session
Nairobi, 6-31 August 1990
Item 2 (b) of the provisional agenda*

PREPARATIONS FOR THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT ON THE BASIS OF GENERAL ASSEMBLY RESOLUTION 44/228 AND TAKING INTO ACCOUNT OTHER RELEVANT GENERAL ASSEMBLY RESOLUTIONS: OVERVIEW OF THE ACTIVITIES OF THE UNITED NATIONS SYSTEM

Overview of system-wide activities relevant to General Assembly resolution 44/228

Note by the Secretariat

CONTENTS

Chapter		Paragraphs	Page
	INTRODUCTION	1 - 11	5
I.	PROTECTION OF THE ATMOSPHERE BY COMBATING CLIMATE CHANGE, DEPLETION OF THE OZONE LAYER AND TRANSBOUNDARY AIR POLLUTION	12 - 28	7
	A. Combating climate change	16 - 22	8
	B. Combating the depletion of the ozone layer	23 - 24	10
	C. Combating transboundary air pollution	25	10

* A/CONF.151/PC/4.

90-15809 1774j (E)

/...

best copy available

CONTENTS (continued)

Chapter		Paragraphs	Page
	D. Other considerations	26 - 28	11
II.	PROTECTION OF THE QUALITY AND SUPPLY OF FRESH-WATER RESOURCES	29 - 41	12
	A. Sustainable use of water resources	34	13
	B. Water supply and sanitation	35	14
	C. Research and assessment of water resources	36	14
	D. Action plans and conventions for the environmentally sound management of international watersheds	37	14
	E. Water quality protection	38	14
	F. Other considerations	39 - 41	15
III.	PROTECTION OF THE OCEANS AND ALL KINDS OF SEAS, INCLUDING ENCLOSED AND SEMI-ENCLOSED SEAS, AND OF COASTAL AREAS, AND THE PROTECTION, RATIONAL USE AND DEVELOPMENT OF THEIR LIVING RESOURCES	42 - 61	16
	A. Environmental assessment	47	17
	B. Protection of the marine environment and coastal zones	48 - 51	18
	C. Fisheries management and development	52	19
	D. Other considerations	53 - 61	19
IV.	PROTECTION AND MANAGEMENT OF LAND RESOURCES BY, INTER ALIA, COMBATING DEFORESTATION, DESERTIFICATION AND DROUGHT	62 - 84	21
	A. Sustainable management of land resources	65 - 69	22
	B. Combating deforestation	70 - 76	23
	C. Combating desertification	77 - 81	24
	D. Other considerations	82 - 84	25

CONTENTS (continued)

Chapter		Paragraphs	Page
V.	CONSERVATION OF BIOLOGICAL DIVERSITY	85 - 94	27
	A. Plant genetic resources	87	28
	B. Animal genetic resources	88	28
	C. Wildlife and protected areas	89	28
	D. Marine living resources	90	28
	E. Planned convention on biological diversity	91	29
	F. Other considerations	92 - 94	29
VI.	ENVIRONMENTALLY SOUND MANAGEMENT OF BIOTECHNOLOGY	95 - 106	31
	A. Microbiological resources centres	98	32
	B. Environmental management	99	32
	C. Agricultural production	100	32
	D. Food production and processing	101	33
	E. Research and development	102	33
	F. Other relevant activities	103	33
	G. Other considerations	104 - 106	33
VII.	ENVIRONMENTALLY SOUND MANAGEMENT OF WASTES, PARTICULARLY HAZARDOUS WASTES, AND OF TOXIC CHEMICALS, AS WELL AS PREVENTION OF ILLEGAL INTERNATIONAL TRAFFIC IN TOXIC AND DANGEROUS PRODUCTS AND WASTES	107 - 114	35
	A. Environmentally sound management of wastes, including hazardous wastes	110	36
	B. Environmentally sound management of toxic chemicals .	111	37
	C. Other considerations	112 - 114	38

READEX FICHE

CONTENTS (continued)

Chapter		Paragraphs	Page
VIII.	IMPROVEMENT OF THE LIVING AND WORKING ENVIRONMENT OF THE POOR IN URBAN SLUMS AND RURAL AREAS, THROUGH ERADICATING POVERTY, INTER ALIA, BY IMPLEMENTING INTEGRATED RURAL AND URBAN DEVELOPMENT PROGRAMMES, AS WELL AS TAKING OTHER APPROPRIATE MEASURES AT ALL LEVELS NECESSARY TO STEM THE DEGRADATION OF THE ENVIRONMENT	115 - 137	39
	A. Poverty alleviation	124 - 128	41
	B. Living environment	129 - 134	42
	C. Other considerations	135 - 137	42
IX.	PROTECTION OF HUMAN HEALTH CONDITIONS AND IMPROVEMENT OF THE QUALITY OF LIFE	138 - 148	44
	A. Review of health/environment/development relationships	142	45
	B. Health risk evaluation and establishment of standards	143	46
	C. Environmental management for pest and vector control	144	46
	D. Environmental health management	145	47
	E. Other considerations	146 - 148	47
X.	DEVELOPMENTAL DRIVING FORCES	149 - 171	48
	A. Population	150 - 155	49
	B. Energy and transport	156 - 162	50
	C. Industrialization	163 - 171	53
XI.	Cross-cutting issues and integrative mechanisms for sustainable development	172 - 204	55
	A. Instruments for achieving sustainable development ...	173 - 179	55
	B. Environmental monitoring and assessment	180 - 186	58
	C. Promotion of international environmental law	187 - 191	60
	D. Promotion of international technology transfer	192 - 196	61
	E. International funding for sustainable development ...	197 - 204	61

INTRODUCTION

1. The General Assembly, in resolution 44/228, convening the United Nations Conference on Environment and Development, requested the full contribution of the United Nations Environment Programme (UNEP) and of all organs and organizations of the United Nations system to the Conference, and, in section II, paragraph 10, requested the Secretary-General of the United Nations to ensure the co-ordination of the contributions of the United Nations system, through the Administrative Committee on Co-ordination (ACC). Subsequently, the General Assembly established the secretariat of the Conference and gave it a mandate to co-ordinate support required by the preparatory process. In addition, at its organizational session, the Preparatory Committee adopted guidelines concerning the contributions of UNEP and the United Nations system.

2. In his report to the organizational session of the Preparatory Committee of the Conference, held at New York from 5 to 16 March 1990, the Secretary-General proposed to make available to the Preparatory Committee a comprehensive overview of relevant mandates and/or activities as well as other analytical material, inter alia, on the interaction between environment and development.

3. In this regard, it should be noted that the General Assembly, in resolution 44/228, requires that environmental issues be addressed in the development context and the Preparatory Committee in addition decided that it would identify various elements at an early stage in its work, thus requiring an analytical approach in the overview such as would favour the exercise of its own responsibilities. The overview, which has been prepared under the aegis of the Designated Officials for Environmental Matters mechanism, seeks to support these objectives.

4. The Preparatory Committee will recall that in its resolution 42/186 the General Assembly adopted the Environmental Perspective to the Year 2000 and Beyond as a broad framework to guide national action and international co-operation on policies and programmes aimed at achieving environmentally sound development, and set out aspirational goals in this regard. The Environmental Perspective addressed sectoral issues (Population, Food and Agriculture, Energy, Industry, Health and Human Settlements, International Economic Relations, other issues of global concern) and in regard to each, set goals and recommended action. The Environmental Perspective, as required by the General Assembly, has been used specifically as a guide in the preparation of the System-wide Medium-term Environment Programme.

5. Our Common Future, the report of the World Commission on Environment and Development, which was welcomed by the General Assembly in its resolution 42/187, contained specific recommendations for achieving sustainable development. The General Assembly requested that these recommendations be taken into account by Governments and the United Nations system in developing their programmes and national development plans.

6. At its forty-fourth session, the General Assembly considered the report of the Secretary-General on the implementation of General Assembly resolutions 42/186 and

42/187. Reports on their relevant activities, presented by the most concerned organs, organizations and programmes of the United Nations system, were made available to the General Assembly and synthesized in the report of the Secretary-General. The General Assembly in its resolution 44/227, noted the critical objectives for environment and development policies that follow from a need for sustainable and environmentally sound development. The present overview and the analysis contained therein takes account of the goals of the Environment Perspective, of the objectives of the System-wide Medium-term Environment Programme for 1990-1995 and of the various members of the United Nations system. Accordingly, while the report is structured in chapters along the nine priority areas listed in General Assembly resolution 44/228, section 1, paragraph 12, efforts have been made to present each of these areas in a broad interdisciplinary context in which the links between development and the life-supporting systems of the planet are pointed out. The concept of "sustainable development" has continued to evolve since it was first put forward some 15 years ago, and currently includes such issues as food security, population, technology transfer, funding mechanisms, consumption patterns, structural adjustment policies, development assistance and environmental security. Two further chapters, on cross-cutting issues, point out the interrelationships. Each chapter first describes the problem addressed in an environment and development context, the relevant objectives of the United Nations system, the main actors involved and the existing co-ordination mechanisms.

7. The intent of the analysis has been to display the action currently under way or planned in the United Nations system, with a view to identifying any gaps. The question is also posed as to what actions could be taken and where to accelerate the achievement of specific objectives or to enhance these objectives, it being understood that the availability of additional resources would be a key consideration. It is hoped that such analysis would assist the Preparatory Committee to decide where it wishes to focus its efforts and the actions it would wish to see set in train in preparation for the 1992 Conference. In reviewing the sections of the chapters concerned with "major activities requiring acceleration or enhancement" and "major gaps", it should be kept in mind that several major comprehensive assessments are currently being made which will identify priorities for action and gaps which need to be filled. They include, for instance, the work of the WMO/UNEP-sponsored Intergovernmental Panel on Climate Control (IPCC), the World Climate Conference, the World Health Organization (WHO) Commission on Health and Environment, and the general evaluation required by the General Assembly of the progress achieved in implementing the Plan of Action to Combat Desertification. The outcome of these will become available prior to the Conference. The suggestions for enhanced activities and filling of gaps are therefore, in many cases, preliminary.

8. It should be noted that in other resolutions adopted at its forty-fourth session the General Assembly requested the preparation of various reports which it considered relevant to the Conference and/or to its preparatory process. In addition to the report on sustainable development pursuant to General Assembly resolution 44/227, paragraphs 19 and 20, referred to above, these include reports on the Plan of Action to Combat Desertification and in particular financing modalities (General Assembly resolution 44/172, sect. A, paras. 6, 7 and 12), the possible adverse effects of sea-level rise (General Assembly resolution 44/206,

para. 5), progress achieved in the protection of global climate (General Assembly resolution 44/207, para. 18), the impacts of large-scale pelagic driftnet fishing (General Assembly resolution 44/225, para. 8), environmental threats and emergencies (General Assembly resolution 44/224, paras. 5 and 7), the control of the transboundary movement of hazardous wastes and their disposal (General Assembly resolution 44/226, sect. III, para. 4), and on the structure and responsiveness of the United Nations to deal with major environmental issues (General Assembly resolution 44/229, para. 5). The Secretary-General has ascribed responsibility to the Executive Director of UNEP in regard to the preparation of these reports, most of which will also be considered by the Governing Council of UNEP or are required to be presented through that Governing Council.

9. In conclusion, it should be noted that the large and complex scope of the Conference, the breadth of development issues and their interrelationship with environmental issues, and the great volume of effort in which the United Nations system is already engaged have made it difficult in the limited time available to refine the analysis further, in particular as regards the gaps identified, and to be confident that all those engaged particularly in development per se have been adequately involved in its preparation. The report draws attention to the most important issues of concern to the United Nations system and the Preparatory Committee but should not be seen as an exhaustive or restrictive list of issues related to the United Nations system activities concerning environment and development. Activities reflected in this report have been reported only when they are of a broad scope and high significance. This has meant that many activities, including seminars and publications, have been left out.

10. Given the limitation of space in the document, the large number of technical co-operation activities carried out by the United Nations system have not been reflected, and this is particularly significant in regard to UNDP and World Bank activities. These activities, however, are generally of such a character that they support the objectives which have been set out.

11. It is hoped, despite the various limitations mentioned above, that this overview provides the basic material which the Preparatory Committee requires for its own efforts.

Chapter I

PROTECTION OF THE ATMOSPHERE BY COMBATING CLIMATE CHANGE, DEPLETION OF THE OZONE LAYER AND TRANSBOUNDARY AIR POLLUTION

12. Climate is the result of interactive processes between the atmosphere, ocean and the land. Evidence of changes in the composition of the atmosphere through anthropogenic emissions of gases and aerosols and the potential environmental hazards thus created augur badly for the future of the planet. Weather and climate affect practically all areas of development. Water resources and agriculture are obvious areas of concern, but other major sectors of the economy, including energy, transport, manufacturing, industrialization, construction and urbanization, health, tourism and many more are all affected by the vagaries of weather and climate.

Extreme weather events are disturbing in their own right, but there is also growing concern that human activities, ranging from the generation of carbon dioxide and sulphur dioxide by the combustion of fossil fuels, to deforestation, burning of fuel wood, various changes in land use and large-scale urbanization, are altering the chemical composition of the atmosphere and consequently the underlying pattern of global weather and climate to such an extent that preventive and adaptive responses are imperative. Thus, the protection of the atmosphere and its climate requires concerted action at national, regional and global levels. The phasing out of chlorofluorocarbons and measures to regulate CO_2 and other greenhouse gas emissions, for example, will have important implications for the achievement of development objectives.

13. Concern over climate change and sea-level rise, ozone-layer depletion and atmospheric pollution has over the past 10 years aroused both increasing public concern and international attention at the highest political level. The work of the Intergovernmental Panel on Climate Change (IPCC), established in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) and discussions in other fora are helping to clarify both scientific understanding and the related policy implications of climate change. A main need is to increase understanding of the world's climate system and of its variability, both natural and human, to enable more precise predictions of potential changes and their likely socio-economic implications, and so allow possible response strategies to be determined. To this end, an increasing number of member organizations, bodies and agencies of the United Nations system are co-operating in climate-related activities, in particular within the World Climate Programme, established by WMO in 1980 in collaboration with UNEP and the International Council of Scientific Unions (ICSU).

14. Co-ordination also takes place through the Global Environment Monitoring System (GEMS) of UNEP which is a collective effort of the world community to acquire through monitoring and assessment the data and information needed for rational management of the environment (see chap. XI).

15. ACC has created a special task force, at the level of executive heads, to monitor and co-ordinate climate change issues as necessary and appropriate, and an Advisory Group on Greenhouse Gases (AGGG) has been set up by WMO, UNEP and ICSU.

A. Combating climate change

16. The World Weather Watch (WWW), organized and developed by WMO, is an integrated global system for the collection, analysis and distribution of weather and other environmental information. It comprises a global observing system, a global data-processing system and a global telecommunications system implemented through national facilities and services operated and owned by individual member countries of WMO. The WWW, supplemented by the oceanographic observation network co-ordinated by the Intergovernmental Oceanographic Commission of UNESCO, the WMO Background Air Pollution Monitoring Network (BAPMON) and the WMO Global Ozone Observing System, provides the fundamental basic data required for monitoring climate, atmospheric composition and air pollution.

17. The World Climate Programme (WCP), being implemented by WMO in collaboration with UNEP and ICSU, has four major components: the World Climate Data Programme (WCDP), the World Climate Applications Programme (WCAP), currently being co-ordinated by WMO in co-operation with other members of the United Nations system; the World Climate Impact Studies (WCIP), being implemented by UNEP and the World Climate Research Programme (WCRP), being carried out jointly by WMO and the International Council of Scientific Unions (ICSU). WMO is responsible for the overall co-ordination of WCP.

18. Within the WCP, emphasis is placed on three major sectors - water, food and energy, although other areas with a likely impact on climate change are also appropriately addressed. Numerous studies and projects are being conducted jointly in these areas between WMO and other members of the United Nations system - notably, UNESCO, FAO and WHO.

19. With UNESCO, WMO has been in a series of some 30 projects addressing a range of topics from studies of hydrological time series to assessing the socio-economic impact of climate change on water resources systems.

20. Major activities within the WCRP include the Tropical Oceans Global Atmosphere (TOGA) programme and the World Oceans Circulation Experiment (WOCE), both of which receive considerable input from the Intergovernmental Oceanographic Commission of UNESCO. The ICSU-SCOR/IOC Committee on Climate Changes and the Ocean co-ordinates the oceanographic component of the WCRP.

21. FAO and IFAD are concerned with reducing or mitigating the effects of potential climate change on agriculture, including irrigation systems, forestry and fisheries. WHO is deeply involved in identification and study of possible health hazards resulting from climate change and UNIDO has established an International Centre for Earth and Environmental Sciences. Most other United Nations bodies and agencies provide similar advice and guidance within their respective areas of competence. The major funding agencies, including the World Bank and UNDP, are providing support to WCP within their respective possibilities. UNDP, in collaboration with WMO, is strengthening national and regional capabilities to assess climate and climate change through the climate computer system CLICOM.

22. In accordance with UNEP Governing Council decision 15/36 (1989), WMO Executive Council resolution 4 (1959), and General Assembly resolutions 43/53 (1988) and 44/207 (1989), WMO and UNEP continue to collaborate in the development of a framework Convention on Climate, utilizing the findings of the UNEP/WMO Intergovernmental Panel on Climate Change and other mechanisms approved by Governments. The Panel will complete its initial report defining the science and effects of, and control strategies for, climate change in August 1990, in time for consideration at the WMO/UNEP/UNESCO/ICSU/FAO second World Climate Conference to be held in Geneva from 29 October to 7 November 1990. It is anticipated that, after approval by the respective governing bodies of WMO and UNEP, intergovernmental negotiations on a framework convention will begin following the Climate Conference and that a final convention could be adopted by the time of the 1992 United Nations Conference on Environment and Development.

B. Combating the depletion of the ozone layer

23. In decision 15/35 of May (1989), UNEP was requested by its Governing Council to support activities approved by the parties to the Vienna Convention and the Montreal Protocol at their first conference (Helsinki, 1989). The 2nd meeting of the Parties to the Montreal Protocol will take place in June 1990. At that meeting, the parties will consider adjustments and amendments to the Protocol, in particular to strengthen it by further limiting the production and consumption of ozone-destroying substances and by establishing funding and other support mechanisms to enable developing countries to comply with the control measures specified in the Protocol. WMO is taking action to plan, design and implement the Global Atmosphere Watch (GAW) approved by the WMO Executive Council in 1989, as a system for early warning of atmospheric changes with a potential effect on ozone and climate change. Within IMO, the maritime community has agreed to co-operate in the global effort to reduce ozone layer depletion by limiting the use of CFCs and halons on board ships. UNIDO is improving the ability of developing countries to meet the control measures specified in the Montreal Protocol by providing advice and information, and through pilot and demonstration projects, technology transfer, pre-investment analysis, and institution building.

24. Studies are being undertaken (by UNDP, UNEP, inter alia) to assess the global costs as well as costs to individual countries of implementing the Montreal Protocol and the need for technology transfer and financial assistance to enable developing countries to comply with the provisions of the Protocol without compromising their development aspirations.

C. Combating transboundary air pollution

25. The WMO Background Air Pollution Monitoring Network (BAPMON) has traced long-range transboundary air pollution since 1968 and has provided most of the atmospheric data to GEMS. This has been supplemented since 1977 by the Co-operative Programme for Monitoring and Evaluation of Long-range Transmission of Air Pollutants in Europe (EMEP). Regional co-operation through this convention and its related protocols on sulphur dioxide (1985), and nitrogen oxides (1988) has led to reduced emissions of the substances. A further protocol on volatile organic compounds is now in preparation. Four international co-operative programmes for the monitoring and assessment of air pollution effects on forests, fresh waters, agricultural crops, and materials and monuments are now operational within this Convention. A joint WMO/IAEA/EEC project (ATMES) initiated in 1989 evaluates atmospheric transport models for radio nuclides. WMO is also involved in studies on long-range transport of pollutants and the effects on the pollution of the world oceans. WHO has been monitoring urban air pollution since the mid 1970s. FAO, UNESCO, and others are examining the effects of atmospheric pollution on the status and health of both natural and human biological support systems. IMO has included the prevention of air pollution from ships in its work programme, including consideration of the quality of marine fuel. UNIDO's activities include rehabilitating existing heavily polluting industries and assisting developing countries to diversify their energy mix to include new and renewable sources.

D. Other considerations

26. Some major upcoming events are:

(a) Follow-up to the 2nd meeting of the Parties to the Montreal Protocol (June 1990);

(b) Publication of the final report of IPCC (August/September 1990);

(c) Second World Climate Conference and consideration of IPCC report by Ministers (October/November 1990);

(d) United Nations Secretary-General's report to the General Assembly on climate change (November 1990);

(e) Eighth session of the Executive Body for the Convention on Long-range Transboundary Air Pollution (November 1990);

(f) Negotiations on a framework convention on climate change (to be concluded 1992);

(g) Second meeting of the Conference of the Parties to the Vienna Ozone Convention, April/May 1991, and 3rd meeting of the Parties to the Montreal Protocol;

(h) Protocol Concerning the Control of Emissions of Volatile Organic Compounds or their Transboundary Fluxes, 1990/91;

(i) Assessment by WHO of human health impacts of climatic change - report available, October 1990;

(j) Air pollution assessment for the world's megacities, WHO and UNEP, 1991.

27. The following major activities require acceleration and enhancement:

(a) Improved monitoring of and reseach on climate change;

(b) Implementation of the Global Atmosphere Watch (GAW) with particular attention to polar and tropical regions;

(c) Better understanding of likely effects of climate change, particularly at the regional level;

(d) Severe limitation on emission of CFCs into the atmosphere;

(e) Reduction or stabilization of CO_2 and other greenhouse gas emissions into the atmosphere (see also chap. XI);

(f) Development of environmentally sound technologies to reduce harmful emissions into the atmosphere;

(g) Assessments of possible impacts of climate change on agricultural and forestry production with a view to providing policy advice on possible response strategies. Similar assessments are also necessary in other economic sectors such as water resources and industry construction;

(h) Programme on sustainable farming practices to demonstrate proven techniques to promote efficiency and reduce emission of greenhouse gases from agriculture and to reduce vulnerability to climate change. Again, similar pilot projects are necessary in other sectors of the economy;

(i) Public information programmes, particularly in developing countries, on potential hazards of climate change, ozone depletion and atmospheric pollution, and the means and measures currently available to mitigate such hazards.

28. Major gaps exist, as follows:

(a) Observational networks must be reinforced to ensure reliable research, monitoring and assessment of possible climate change, depletion of the ozone layer and transboundary air pollution;

(b) "Clean" technologies need to be developed and be made available cheaply, particularly to developing countries;

(c) There needs to be analysis of employment, training, and socio-economic implications of climate change and ozone-layer depletion with policy options for both developed and developing countries;

(d) The effects of climate change and ozone-layer depletion on agricultural systems and the welfare of the rural poor is an area which requires priority attention;

(e) Further research monitoring and assessment is needed regarding the oceans/atmosphere interactive processes.

Chapter II

PROTECTION OF THE QUALITY AND SUPPLY OF FRESH-WATER RESOURCES

29. The world's fresh-water resources face a number of major problems. There are two main ones: these resources are getting scarce due to the ever increasing demand, and they get more and more polluted due to insufficient protection of the quality of surface and ground water. Three sectors are concerned: the industrial, agricultural and domestic sectors. Rapid urbanization also leads to a rapid increase in demand for domestic water supply.

30. The developing countries face two main problems: (i) there is a shortage of water for agriculture; (ii) the fact that so many people in developing countries lack safe drinking water and basic sanitation largely explains the persistently high prevalence of many communicable diseases, especially among infants and

children. The latter problem is exacerbated in the rapidly developing megacities in many developing countries where most slum areas have inadequate water supplies and drainage. The main problem for industrialized countries is pollution of the water resources, which has an impact on drinking water in many areas. It also jeopardizes the proper functioning of the aquatic ecosystems concerned and the survival of many species in these habitats. Water is essential to energy production in most countries, but in many developed countries most of the hydropower sites have been developed and those remaining are subject to considerable argument because of ecological considerations. Water management needs to include measures aimed at preventing floods and at mitigating the consequences of both floods and drought.

31. Environment and development problems related to fresh-water resources are difficult to deal with at the national level only. Since surface and ground waters are not confined to national boundaries, inter-country co-operation is indispensable to address the problems outlined, especially where international river basins are concerned.

32. The United Nations system, harnessing the different fields of competence and responsibilities of its member organizations and entities, strives for the development and rational management of fresh-water resources for agricultural, industrial and domestic purposes. The aim is to strike a balance between using water as a major natural resource for development and the need to safeguard water since it is a limited resource (sustained use), to protect it against pollution and to protect the aquatic habitats which depend on it. The system's activities are therefore directed towards ensuring the assessment of the available water resources and their quality, the provision of safe drinking water supply and sanitation services, the implementation of effective pollution control of surface and ground-water resources, the prevention of adverse environmental impact of water development activities, and the development and application of proper technologies in all countries for efficient and sustainable use of water resources. Particular attention is paid to transboundary activities related to water.

33. Because of the multidisciplinary and multipurpose nature of water management and development, essentially all United Nations agencies have programmes or projects in this area. Co-ordination is achieved through the ACC Intersecretariat Working Group on Water Resources.

A. Sustainable use of water resources

34. The Mar del Plata Action Plan provides an overall framework for system-wide action related to water resources and fresh-water ecosystems. The progress of the Plan is currently being examined in the key areas, and the strategy for the 1990s that will come out of this examination will be reviewed by the Committee on Natural Resources in 1991. One part of this examination, an inter-agency action programme on water and sustainable agriculture, is being prepared by FAO. FAO is also engaged in the assessment and mitigation of the environmental impact of aquaculture and in the rational use of marginal-quality water. UNDP, IFAD, FAO and UNIDO

support projects aimed at sustainable use of resources as part of watershed management (see chap. IV), and UNDTCD executes masterplans on water management.

B. Water supply and sanitation (see also chap. IX)

35. With the participation of many agencies, and an increasing number of multilateral and bilateral organizations, the activities of the International Drinking Water Supply and Sanitation Decade (IDWSSD) are being extended beyond 1990. A Collaborative Council of External Support Agencies has been established to that end. An assessment report on the achievement of the Decade will be considered at the forty-fifth session of the General Assembly.

C. Research and assessment of water resources

36. The International Hydrological Programme (IHP) of UNESCO and the Operational Hydrological Programme of WMO, in collaboration with several other agencies, aim at providing a scientific basis and the trained manpower needed for the assessment, planning and rational management of the world's water resources. Particular attention is given to technology transfer by promoting education and training. The Department of Technical Co-operation for Development is developing software for and hydrological data bases on ground water.

D. Action plans and conventions for the environmentally sound management of international watersheds

37. Under the programme for Environmentally Sound Management of Inland Waters (EMINWA), UNEP, in co-operation with other agencies, will continue to develop international action plans such as those already initiated in the Zambezi River basin and Lake Chad. Preparatory steps are being taken to study the feasibility of action plans in Lake Baikal, the Orinoco River basin, the Aral Sea, the Danube River, the Nile River basin. A framework convention on the protection and use of transboundary watercourses and international lakes is being elaborated within ECE as well as guidelines on responsibility and liability regarding transboundary water pollution. A code of conduct on Accidental Pollution will be published in 1990 (ECE, UNEP).

E. Water quality protection

38. The WHO water quality monitoring component of GEMS has laid the basis for more comprehensive monitoring of the quality of fresh water, internationally and nationally, in support of water pollution control. Advisory services are provided by FAO on quantity and health aspects of water resources development projects. WHO is updating its guidelines on drinking water quality to serve as a basis for national standards. A global assessment of fresh-water quality is now followed by an evaluation of regional water pollution issues and the formulation of a strategy

for the 1990s on water pollution control (United Nations, UNDP, UNEP, WHO). UNDTCD has a large ongoing programme for the management and monitoring of existing water quality in developing countries.

F. Other considerations

39. Some major upcoming events are listed below:

(a) General Assembly review of the IDWSSD (November 1990, New York) - Inter-Agency Steering Committee for Co-operative Action for the Decade;

(b) Inter-agency action programme on water and sustainable agricultural development (October 1990) (FAO, on behalf of ACC Inter-Secretariat Group on Water Resources);

(c) Inter-agency/donors international conference on water resources and sustainable development (1991, ACC Inter-Secretariat Group on Water Resources);

(d) International Conference on Water and the Environment (London, 1992) to update and enhance actions at both national and international levels (WMO, on behalf of ACC Inter-Secretariat Group on Water Resources);

(e) Technical Conference on the Hydrological Services of Africa, Addis Ababa, September 1991 (ECA/OAU/WMO/UNESCO/World Bank);

(f) Global consultation on "Safe Water and Sanitation for the 1990s: Serving the Unserved", (September 1990, New Delhi) to reach consensus on the follow-up of the IDWSSD (IDWSSD Steering Committee, UNDP and World Bank);

(g) Publication in early 1992 of a Global Fresh Water Quality Atlas (UNEP/WHO);

(h) Publication of a comprehensive policy document on sustainable urban water supply and sanitation (December 1991, UNCHS).

40. The following major activities require acceleration or enhancement:

(a) Acceleration of the implementation of the action plans and conventions referred to in paragraph 37;

(b) Acceleration of the development and implementation of follow-up activities to the International Drinking Water Supply and Sanitation Decade, taking account of adverse developmental and environmental impacts of large water demands exerted by rapidly growing urban centres.

(c) Enhancement of the implementation of the Inter-Agency Action Programme on Water and Sustainable Agriculture, referred to in paragraph 34;

(d) Acceleration of donor's support to action programmes and financial mechanisms of the United Nations system;

(e) Promotion of water quality management in order to sustain water quality requirements of domestic, industrial and agricultural users referred to in paragraph 38.

41. Despite progress achieved under the Mar del Plata Action Plan, numerous gaps remain:

(a) Recognition of the increasing demand and competition for fresh-water resources as a major environmental issue;

(b) Monitoring and assessment of water resources and water quality, in particular, in Africa;

(c) Co-ordination, at the national level, of different water uses;

(d) Effective linkages between water management, management of terrestrial ecosystems and national development planning;

(e) Integration of water quality monitoring, assessment and control within water resources development and management programmes;

(f) Lack of proper pricing mechanisms to ensure efficient water use and conservation in most countries.

CHAPTER III

PROTECTION OF THE OCEANS AND ALL KINDS OF SEAS INCLUDING ENCLOSED AND SEMI-ENCLOSED SEAS, AND OF COASTAL AREAS, AND THE PROTECTION, RATIONAL USE AND DEVELOPMENT OF THEIR LIVING RESOURCES

42. The oceans cover 70 per cent of the Earth's surface and play a crucial role in regulating climate, sustaining animals and plants, and providing an abundance of resources for human use. However, development is now threatening the oceans and seas in many ways. Unmanaged urban growth, intensive agricultural practices, offshore oil exploitation, maritime transportation, construction in coastal areas, mineral extraction, deforestation, river basin development and unsustainable fishing, all have negative consequences for the marine environment if conducted in an uncontrolled way.

43. The deterioration in environmental quality arising from some or all of the above-mentioned activities has serious implications for development prospects, especially for the poorest of the poor. For instance, the over-exploitation of fisheries stocks and the destruction of fisheries nurseries has negative implications for artisanal fishing communities.

44. The general objectives of the United Nations system in this area are to improve man's understanding of the role of the oceans in the operation of biogeochemical and climatic cycles and processes, and to accumulate knowledge of the status of trends in and the effects of human impact including ocean pollution (UNEP, UNESCO/IOC, United Nations, WMO, FAO); to facilitate international co-operation at global and regional levels for the prevention and control of pollution from all sources, including exploration/exploitation of the sea-bed (United Nations, UNEP, IMO, WHO, IAEA, UNESCO/IOC); to achieve the integrated management and sustainable development of coastal and island systems, and to rehabilitate them where they have been degraded (United Nations, UNEP, UNESCO); and to protect and manage representative marine and estuarine ecosystems, with a view to maintaining long-term viability and genetic diversity, and to provide for the sustainable exploitation of living marine resources (UNEP, IMO, FAO, UNESCO/IOC).

45. The provisions of the 1982 United Nations Convention on the Law of the Sea provide a comprehensive framework of international law and are designed to operate as an umbrella for further global, regional and national actions. The Office for Ocean Affairs and the Law of the Sea provides regular overviews, through annual reports on the Law of the Sea to the General Assembly, of all relevant global, regional and national developments in marine environmental law and policy.

46. United Nations system activities provide coverage of most environmental issues and there is an extensive network of co-ordinating mechanisms, including periodic inter-agency and interregional meetings organized by UNEP and by the United Nations (OALOS) with respect to marine affairs in general; the IMO/FAO/UNESCO/WMO/WHO/IAEA/United Nations/UNEP Joint Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP), with respect to the provision of independent scientific advice on specific problems relating to the marine environment; and the Inter-Secretariat Committee on Scientific Programmes related to Oceanography (ICSPRO).

A. Environmental assessment

47. Assessment activities fall either under UNEP's marine pollution monitoring system as a contribution to the Global Environment Monitoring System (GEMS) and Earthwatch (see chap. XI), and are implemented through regional seas action plans, or under UNESCO/IOC's programme for the Global Investigation of Pollution in Marine Environment (GIPME). The latter involves the generation of information on open ocean contaminants, distribution of contaminants in coastal waters and their biological effects, and training activities in co-operation with UNEP, IAEA/International Laboratory for Marine Radioactivity and IMO. A project for global monitoring of climate-relevant changes to the marine and coastal environment is being prepared (UNEP, UNESCO/IOC, WMO) and regional assessments are being made in this respect. Also of relevance is UNESCO's COMAR project on the development of a scientific basis for coastal marine protection and management, and IAEA's research on radioactive substances and other pollutants in the marine environment.

B. Protection of the marine environment and coastal zones

48. A number of United Nations bodies and agencies are active in this general area. WHO is involved in the protection of coastal recreational areas from pollution by sewage, the protection of seafood from pathogens causing food-borne epidemics, and the protection of edible marine organisms from contaminants such as heavy metals and pesticides. The Department of Technical Co-operation for Development activities include policy development for protection of the marine and coastal environment and plant resources in the Caribbean, and the improvement of living conditions in coastal areas in South-East Asia. UNCHS (Habitat) is conducting research and provides technical assistance to Governments in environmentally sound planning and management of coastal zone development. UNIDO, in co-operation with UNEP, FAO, UNESCO and the United Nations (OALOS) is promoting pollution control technologies. Efforts are also under way in co-operation with UNEP to establish regional centres on research and development in marine industrial technology, within the framework of the United Nations Convention on the Law of the Sea. UNESCO, in co-operation with IUCN, promotes the establishment of biosphere reserves in coastal zones.

49. Under UNEP's Oceans and Coastal Areas Programme some 120 Governments are participating in 10 Regional Seas Action plans for pollution control and coastal zone management developed by UNEP. Regional conventions and protocols address such issues as dumping, emergency co-operation, protected areas and prevention of pollution from offshore activities. Many United Nations organizations and major international non-governmental organizations co-operate with UNEP on the Global Plan of Action for Marine Mammals and related activities on living marine resources (see also chap. V, para. 90).

50. IMO provides the global forum for development of international regulations on the prevention and control of pollution from ships and the safety of life and property at sea. The MARPOL 73/78 Convention, which regulates all forms of ship-generated pollution has been ratified by some 60 States representing 85 per cent of the world's merchant tonnage.

51. The Convention for the Prevention of Marine Pollution by Dumping of Wastes and Other Matters, 1972 (London Dumping Convention), for which IMO provides secretariat functions, regulates the disposal of wastes by dumping and incineration at sea. Consultative meetings of Contracting Parties are considering the extension of the Convention to include pollution from land-based sources and offshore activities. Following the "Exxon Valdez" incident and other major oil spills during 1989, IMO is giving renewed attention to the co-ordination of international response efforts following a major incident and to additional safety and pollution prevention measures which may further reduce the risk of such events.

C. Fisheries management and development

52. The core of the FAO programme consists of the conservation and rational utilization of fishery resources in marine, coastal and inland waters, the development of small-scale fisheries and aquaculture, and the improvement of fisheries planning. UNESCO/IOC and FAO co-operate on a programme of ocean science in relation to living resources, which is directed toward the protection and rational use of development of marine living resources, in particular recruitment in relation to ocean conditions and processes, understanding of harmful algal blooms (natural or man-induced) and providing a scientific basis for protection and sustainable use of ocean resources. IFAD is involved in numerous fisheries projects, all of which have as their objective the rational uses of fisheries resources by artisanal fishermen. UNDP is also involved in the conservational management of fishery stocks within Exclusive Economic Zones, particularly in the context of artisanal or small-scale fishing, and is collaborating with the World Bank and other organizations in the Mediterranean Environment Technical Assistance Programme (METAP).

D. Other considerations

53. Some major upcoming events are:

(a) Environment assessment

(i) Development of Tsunami warning systems (1990-1992, UNESCO/IOC, UNDP) and of improved storm surge and tropical cyclone predictions (including also WMO and UNEP);

(ii) A meeting on global marine pollution monitoring (1991, UNEP);

(b) Protection of the marine environment and coastal zones

(i) International Conference on Coastal and Port Engineering in Developing Countries (UNDTCD/Government of Kenya, September 1991);

(ii) International Conference on Co-operation on Oil Pollution Preparedness and Response, November 1990, at which a new international convention on this subject is due to be adopted (IMO);

(iii) An updated report for the 1992 Conference analysing UNCLOS provisions dealing with protection/preservation of the marine environment; and a set of draft rules and regulations concerning pollution from exploration/exploitation of deep sea-bed mineral resources;

(iv) Intergovernmental panel to evaluate the social, economic, political and legal aspects of the disposal of radioactive wastes at sea, and development of a new assessment procedure for disposal of substances into the sea (London Dumping Convention);

(v) A review of international standards in respect of oil tanker design/construction and training/certification of seafarers (1990/91, IMO);

(c) Fisheries management and development

(i) Report by FAO on fisheries, environment and sustainable development, for the Committee on Fisheries (1990);

(ii) UNESCO/IOC-FAO Regional Workshops on abnormal algal blooms (1990-1992);

(iii) Review by UNEP, with FAO and the International Whaling Commission (IWC), of the impacts of large-scale pelagic driftnet fishing, and possible management measures, in response to General Assembly resolution 44/225.

54. Ratification, implementation and enforcement of internationally agreed rules pertaining to the prevention of marine pollution from ships, dumping at sea and the disposal into the sea of substances deleterious to the marine environment are impeded by a lack of adequate human resources and adequate means (instruments, ships, funding) which would allow effective action to be taken. Technical assistance in this regard should be intensified through the financing of specific national, regional and interregional projects.

55. The Workshop on the Legal Régime for Living Resources in Large-scale Marine Ecosystems, scheduled for 1990, would benefit from the allocation of additional resources, as would the South Asian Seas and Eastern African Regional Action Plans, which are now at a standstill. The injection of resources would also facilitate initiation of action plans for the Black Sea and North-West Pacific and the strengthening of action plans in East Asia, the South-East Pacific and Wider Caribbean, and would enable the launching of a scheme to provide systematic training for oil and chemical spills response personnel in developing countries adjacent to major shipping routes.

56. Analysis of the expected impact of potential climate change on socio-economic activities and measures to mitigate these effects for coastal areas requires the allocation of additional resources, as does the long-term monitoring of coastal and near shore areas for climate changes.

57. Also falling under this general heading are: improved management and regulation of driftnet fisheries; the review of regulations for the disposal of hazardous wastes at sea, including incineration at sea; and preparation/implementation of legal agreements/action plans on biological diversity in the marine and coastal environment (see chap. V); and enhancement of activities on marine industrial technologies, especially on pollution control.

58. The nature of international conventions in this field, with their differences in geographical scope and coverage of subject-matter, adds to the problem of co-ordination and implementation. Gaps in the present international legal framework should be identified, together with the ways and means by which the present situation could be supplemented by new treaty instruments.

59. Available options must be identified to enable Governments to cope with the potential threat of global warming and its consequences for coastal areas that are likely to be affected by rise in sea level.

60. The use and exploitation of living marine resources on the high seas beyond the Exclusive Economic Zone requires additional management and legal measures to ensure their sustainable development.

61. Industrial and agricultural practices which negatively affect inland and coastal fisheries need special attention to ensure that the environmental consequences of development activities take into account downstream activities, and are well understood and controlled.

Chapter IV

PROTECTION AND MANAGEMENT OF LAND RESOURCES BY, INTER ALIA, COMBATING DEFORESTATION, DESERTIFICATION AND DROUGHT

62. One of the major global challenges is to produce more food, fibre and timber for growing populations, and their demands on land resources are a major cause of land degradation, especially deforestation and desertification. The problems of land degradation cannot be dissociated from the need to alleviate rural and urban poverty in marginal lands. The use of the land in ways that extract soil nutrients without replenishing them, depletes soil fertility and exacerbates the effects of phenomena such as drought, particularly in the arid and semi-arid areas. The result can be soil erosion, degradation of vegetation cover, leading to loss of economic productivity and biological diversity, and to famine, malnutrition and food insecurity in the poorest parts of the world. On the other hand, intensive use of agriculture inputs occurs primarily in the developed countries, where improper or excessive applications of agricultural chemicals and machinery may have detrimental side-effects on soil, water, air and human health.

63. In order to meet present and future demands on a sustainable basis, the protection and improved management of land and water resources including suitable land stabilization and reclamation practices, and appropriate use of agricultural inputs without environmental damage must be an essential part of the development process. This involves the adjustment of national land use policies, pricing mechanisms and incentives, conservation of land resource potentials, farming system development, integrated plant nutrient and pest management systems, agroforestry, conservation and sustainable use of forests and savannas, halting and reversing land degradation and desertification, promotion of sustainable land use practices and monitoring and assessment of soil and vegetation.

64. The objectives pursued in this area by relevant United Nations bodies and agencies aim at improving food production and related systems and institutions, and improving nutrition and the income of farmers, thus contributing to the attainment of food security at the household and national level, provision of fibre, biomass-energy, timber and shelter without resource depletion or environmental degradation, and restoration of the resources base where environmental damage has

been occurring. The Programme of Action on Agrarian Reform and Rural Development, the United Nations Plan of Action to Combat Desertification, the World Conservation Strategy, the World Soil Charter, the Tropical Forestry Action Plan, provide mechanisms for co-ordinating activities of the United Nations system and the Governments. Co-ordination is also pursued through mechanisms such as the ACC Task Force on Rural Development, the Inter-agency Working Group on Desertification (IAWGD), and the Consultative Group on Desertification Control (DESCON).

A. Sustainable management of land resources

65. Within the framework of the Plan of Action for the Implementation of the World Soils Policy, UNEP, in co-operation with other agencies and organizations, is assessing global soil degradation and is assisting developing countries in designing their national soils policies. Major FAO activities at global, regional and national levels relate to inventories of land and water resources, evaluation of crop potential, assessment of population supporting capacities, balanced soil and plant nutrition systems, and land use planning for sustainable use of resources and promotion of sustainable land use practices, including integrated pest management. They are implemented, among others, within the framework of the Programme of Action for African Agriculture Development for the next 25 years adopted by the FAO Regional Conference for Africa (1986); the Programme of Action for Agriculture and Rural Development for Latin America adopted by the FAO Regional Conference for Latin America and the Caribbean (1988); the Programme of Action Related to Environmental Aspects in Agriculture, Forestry and Fisheries Policies in Europe adopted by the FAO Regional Conference for Europe (1988); and the Programme of Action for Environmental Protection for Agriculture and Food Production in the Near East, adopted by the FAO Near East Commission on Agriculture (1989).

66. Following the recommendations of the FAO Committee on Agriculture, an operational strategy on "Improving the Productivity of Dry Land Areas" is being developed.

67. IFAD projects focus on alleviating rural poverty, hunger and malnutrition in rural areas, and seek to reverse the interlinked process of land degradation and rural poverty.

68. WFP's aid aims at helping developing countries overcome problems that have a direct impact on land through forestry, soil conservation, agricultural productivity, range-land management projects, and physical conservation works.

69. The Man and the Biosphere (MAB) programme of UNESCO provides an intergovernmental focus for promoting scientific approaches for sustainable development of land resources and combating land degradation such as deforestation, desertification and drought. Particular attention is given to ecologically sound resource management in arid and semi-arid zones, humid and sub-humid tropics, and mountain regions.

B. Combating deforestation

70. The joint FAO/UNDP/World Bank Tropical Forestry Action Plan (TFAP) provides the framework for the efforts of the international community to address this problem. TFAP serves to identify development constraints in tropical forestry and to set common priorities for countries and donors. National tropical forestry action plans (TFAPs) have been requested by 75 Governments, and at present 29 such plans are ongoing. UNDP is the major financing agency for 22 plans and is in partnership with other agencies for an additional 31 plans.

71. FAO's activities in forestry are geared to: (i) integrating trees and forests with other land uses, particularly in arid lands and mountainous watersheds; (ii) raising the productivity and broadening the range of goods and services derived from forests on a sustainable basis; (iii) improving the contribution of forestry to food security; (iv) promoting increased participation of rural people; (v) promoting a broader and more efficient use of these resources through appropriate forestry-based industries, including small-scale enterprises; (vi) adapting and strengthening the institutional framework of national forestry programmes.

72. FAO's 1990 Global Forestry Resources Assessment Study includes information on deforestation and reafforestation rates and trends.

73. UNESCO, under its MAB programme, focuses on topics that also include ecological and economic sustainability of tropical forest management, forest regeneration, and ecosystem rehabilitation in the humid tropics.

74. UNEP also plays an active role in implementing the Tropical Forestry Action Plan by strengthening the conservation component of tropical forest ecosystems. UNEP supports youth activities in tree planting and forest ecosystems conservation. It supports several African countries in implementing the reafforestation plans recommended by the African Ministerial Conference on the Environment.

75. UNSO is particularly active in combating deforestation in the fragile forest ecosystems of Africa's drylands. UNIDO's activities demonstrate rational use of forest products for added value to the rural and national economy.

76. IFAD projects aiming at alleviating poverty deal with the problems associated with shifting cultivation in areas where this agricultural system is no longer viable. In the context of these projects, alternative land use systems are promoted, with research and extension devoted to the development of, inter alia, suitable agroforestry systems, the introduction of crop rotations using leguminous crops, and integrated crop livestock systems that fit in with the needs of the rural poor.

C. Combating desertification

77. Under the United Nations Plan of Action to Combat Desertification (PACD), UNEP is providing assistance to countries for the development and implementation of national plans of action, and has initiated activities to evaluate progress achieved in implementing them, including an assessment of desertification at the global, regional and local levels, the completion of a World Atlas of Thematic Maps on Desertification, and studies on new financing methods to combat desertification, all of which will be completed by 1992, as required by General Assembly resolution 44/172.

78. FAO's activities aimed at combating desertification include measures to curb the rate of desertification through research and training activities, improved supply of fuel wood, soil and water conservation, agroforestry, management of woody vegetation and sand dune stabilization. Regional networks for arid zone forestry and desertification have been established. FAO is also assisting several countries in the Sahel and Northern Africa in preparing national PACDs and in drought preparedness and management.

79. UNESCO provides the scientific basis and trained manpower for combating desertification. The main emphasis of its Man and the Biosphere (MAB) programme is on an ecosystem approach. In 1990-1991, UNESCO will continue to support in a series of pilot projects, applied research and demonstration, and will implement training activities centred on the improved management of arid and semi-arid lands and the investigation of the effects of drought. Results of these projects will be published in the MAB book series.

80. UNSO's activities relate mainly to 22 countries of the Sudano-Sahelian region of Africa. It seeks to combat desertification and promote drought preparedness through: (i) assistance to Governments in planning, co-ordination and ecological monitoring; (ii) projects on deforestation control, integrated land management, irrigation and water harvesting; (iii) special studies on drought and desertification as the focal point of a group of United Nations bodies and agencies to monitor the Programme of Action for African Economic Recovery and Development (UNPAAERD); (iv) joint project with France and other United Nations bodies and agencies on "Observatory of the Sahara and Sahel"; (v) joint UNSO/NGO project on the development of a Sahel information system on desertification.

81. IFAD's activities related to desertification aim at reversing the processes of land degradation through the introduction of soil and water conservation techniques, dryland farming methods, agroforestry and crop livestock mixes. The IFAD Special Programme for Sub-Saharan African Countries Affected by Drought and Desertification addresses, through project financing, the problems of environment degradation and the sustainability of agriculture in relation to poverty. The second phase of this programme is currently under consideration.

D. Other considerations

82. Some major upcoming events are as follows:

(a) Sustainable management of land resources

(i) An International Scheme for the Conservation and Rehabilitation of African lands will be presented to the FAO Regional Conference for Africa in June 1990;

(ii) Following recommendations by the FAO Commission on Fertilizers, an International Programme for Sustainable Soil Fertility Development is to be launched. Regional case-studies will be carried out in 1991 in collaboration with IFDC, and nutrient balance sheets and a code of conduct for use of fertilizers will be developed;

(iii) FAO technical consultations on environment and agriculture (1991), to be followed by a joint FAC/UNEP meeting on sustainable agriculture (1991/1992) to deal with strategies and tools for sustainable agriculture and related policy issues;

(iv) Fourteenth International Soil Science Society (ISSS) Congress (August 1990) to discuss and endorse, inter alia, methodologies and outputs of the Global Assessment of Soil Degradation and to review two reports on the effects of expected climate change on soil processes (UNEP/ISSS/IIASA);

(v) Comprehensive interregional study by UNCHS on the role of drainage in stabilizing and reclaiming land for development (1991).

(b) Combating deforestation

(i) Second consultation on wood and wood products industry (late 1990, UNIDO);

(ii) Independent assessment of TFAP to be presented September 1990 (FAO/World Bank/UNDP);

(iii) Global Forestry Resources Assessment, 1991 (with preliminary data in 1990) (FAO and other organizations);

(iv) Finalization of methodologies for the assessment of the real value of forests, late 1991 (UNEP/FAO/World Bank);

(v) Tenth World Forestry Congress, June 1991 (FAO);

(vi) Nineteenth International Union of Forestry Research Organizations World Congress, August 1990 (IUFRO).

(c) Combating desertification

(i) Assessment of desertification at the global, regional and local levels and the completion of a world map of desertification as requested by the General Assembly in resolution 32/172, of 19 December 1977 (UNEP/IAWGD);

(ii) 'Evaluation of progress achieved in implementing the Plan of Action to Combat Desertification for 1977-1992, January-February 1991 (UNEP/UNSO/IAWGD);

(iii) Assessment and follow-up report on Drought and Desertification in the Context of the Priority of Action for African Economic Recovery and Development (UNPAAERD) by the United Nations Secretary-General's steering committee.

83. Certain major activities require acceleration or enhancement, as listed below:

(a) Enhancement of the implementation of the Plan of Action to Combat Desertification and acceleration of the preparation of the National Plans to Combat Desertification, assistance to countries affected by soil degradation and desertification in formulating national policies and plans for combating desertification as part of their development plans;

(b) Further promotion of the development of the Strategy for Drylands by identifying priority areas for action programmes at the regional and national levels;

(c) Acceleration of activities to be developed under the International Programme for Sustainable Soil Fertility Development;

(d) Acceleration of formulation and implementation of effective long-term national strategies under the Tropical Forestry Action Plan.

84. The major gaps are as follows:

(a) Adjustments to aid programmes to provide adequate funding of programmes to combat soil degradation, deforestation and desertification;

(b) Development of sustainable alternatives to shifting cultivation that would be acceptable to small farmers;

(c) Identification of economically and financially viable soil and water conservation techniques, geared towards the needs of small farmers;

(d) Sustainable development of dryland areas with a high population and pressing needs, including development of supplementary or alternative livelihood systems that are economically and ecologically sound;

(e) Strategies to alleviate deforestation and desertification caused by the conglomeration of refugees/displaced persons and their livestock in environmentally fragile areas.

Chapter V

CONSERVATION OF BIOLOGICAL DIVERSITY

85. The conservation of natural ecosystems and the maintenance of biological diversity constitute one of the most pressing issues of our time, although it is still far from fully appreciated by decision makers or supported by public opinion. Biological diversity is essential for sustainable development, the continued functioning of the biosphere and human survival. Countless species of plants and animals are still undiscovered or undescribed. Most of them are in the tropics and sub-tropics, and many may be of significant value as sources of food, fibre, drugs, chemicals or other materials. Species are becoming extinct at an unprecedented rate, essentially as a result of human activity, particularly through the irreversible alteration of their habitats. Effective management of plants and animals depends upon maintenance of their habitats, and also requires control of their utilization as well as the involvement of local people and strengthening of national capabilities. Existing protected areas are unevenly distributed and inadequately documented, and protective legislation is often poorly enforced. There is also a need for the integration of conservation with rural development, and for the local understanding of that need. All cultivated plants and domestic animals originate from wild species, and it is imperative to protect representative samples of their wild relatives as the basis for continuing genetic selection and improvement. The maintenance and expansion of agricultural, forestry and fisheries production will ultimately depend on the protection of adequate reservoirs of genetic material. The emergence of techniques such as genetic engineering clearly adds to, rather than diminishes, the need to maintain the richest possible pool of wild genes. The maintenance of biological diversity and the development of properly managed protected areas will constitute a formidable challenge in the next decade, requiring major national and international commitment for action and stronger co-ordination and financing mechanisms to channel resources to the priority areas.

86. The United Nations system strives for the conservation and utilization of biological diversity through improved knowledge, assessment and monitoring of genetic resources and ecosystems, as well as through developing proper national and international tools and mechanisms for this purpose. These concerted efforts are guided by the principles embodied in the International Undertaking on Plant Genetic Resources, the World Conservation Strategy, the World Charter for Nature, the Action Plan for Biosphere Reserves and the Tropical Forestry Action Plan. Co-ordination among the United Nations organizations most directly concerned is maintained through the Ecosystem Conservation Group (constituted by UNEP, FAO, UNESCO, IUCN) and co-operation is sought with other international organizations, as required. While FAO is concerned both by *in situ* and *ex situ* conservation and utilization of genetic resources, the focus of the programmes of UNEP and UNESCO is mainly on *in situ* conservation and ecosystems research. Funding organizations such as UNDP, the World Bank and IFAD increasingly incorporate objectives related to ecosystems and biodiversity conservation in regular forestry and agricultural development projects.

A. Plant genetic resources

87. The International Undertaking on Plant Genetic Resources and its Commission and Fund (FAO) are well known mechanisms for co-ordinating international action in plant conservation, including also the development of farmer's rights, establishment of principles regarding the availability of and access to genetic material and strengthening national capabilities to conserve. A global network of gene banks, housing the world base collections of crop germplasm co-ordinated by the International Board for Plant Genetic Resources (IBPGR), has been established.

B. Animal genetic resources

88. A joint FAO/UNEP Panel of Experts on Animal Genetic Resources Conservation and Management was constituted in 1983. Pilot data banks for animal genetic resources are operational in Africa, Asia and Latin America, offering ready access to information on genetic conservation and improvement of livestock. A code of practice is being prepared by FAO to reduce the risks resulting from the international introduction of exotic fish, shellfish and crustacean species.

C. Wildlife and protected areas

89. Major ongoing activities in this field are based on close co-operation between the relevant United Nations organizations, in particular UNEP, FAO and UNESCO, and IUCN and WWF. They are often related to major existing conventions such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Convention on the Conservation of Migratory Species of Wild Animals, the Convention on Wetlands of International Importance especially as Waterfowl Habitat. A World Conservation Monitoring Centre (WCMC) to monitor the status of threatened species and protected areas has been created within GEMS with the support of UNEP, IUCN and WWF. The Action Plan for Biosphere Reserves developed within UNESCO's Man and the Biosphere (MAB) programme is implemented jointly by the members of the Ecosystems Conservation Group. The Convention Concerning the Protection of the World Cultural and Natural Heritage (UNESCO) also contributes to the conservation of biological diversity. A European Red List of Threatened Animals and Plants, together with recommendations to Governments on its application is being developed by the ECE. UNDP conducts regional projects to support the Amazonian Botanical Research programme, and Amazonian universities, and the Tropical Rain Forest Sustainable Management.

D. Marine living resources

90. Major activities aimed at the protection of the biological diversity of the marine and coastal environments are part of the programmes of UNEP, FAO and UNESCO/IOC. Joint efforts are made to prepare and implement respective legal agreements and action plans. The IOC/FAO Programme on Ocean Science in Relation to Living Resources is directed towards the protection and rational use of marine living resources. The Global Plan of Action for the Conservation, Management and

Utilization of Marine Mammals (UNEP, FAO) includes as one major objective area the survival of the existing species of marine mammals (see chap. III).

E. Planned convention on biological diversity

91. Pursuant to decision 15/34 of UNEP's Governing Council and General Assembly resolution 41/229, paragraph 22, welcoming that decision, an International Convention on Biological Diversity is being prepared through intergovernmental consultations. The United Nations system contributions are provided through the Ecosystem Conservation Group.

F. Other considerations

92. Some of the major upcoming events are as follows:

(a) A global action plan on plant genetic resources (FAO);

(b) Development of a strategy for animal genetic resources and the establishment of an international co-ordinating mechanism on animal genetic resources (FAO);

(c) World Watch List of Endangered Livestock Breeds, 1991 (FAO/UNEP);

(d) Assessment of the international biosphere reserve network which will result in new guidelines for the management of biosphere reserves (UNESCO, UNEP);

(e) Promotion of the further development of conservation strategies, planning of systems of wildland areas, and protected areas and management of wildlife for the Latin American and the Caribbean region, involving local communities for rural development, 1990-1992 (UNEP/FAO);

(f) Analysis and evaluation of the management of biological diversity in relation to natural resources management, resulting in proposals for the conservation of biological diversity in each participating country and trends therein, focusing on major issues - e.g., disturbance of ecological systems and impoverishment of biological diversity, 1990-1995 (UNEP/ACI);

(g) Project on ecosystem function of biological diversity - 1991-1992 (UNESCO-MAB/IUBS/SCOPE);

(h) Adoption of an international framework legal instrument on biological diversity, 1992;

(i) Adoption and launching of the second World Conservation Strategy for the 1990s, 1991.

93. The following major activities require acceleration or enhancement:

(a) Action Programme for the Sustainable Development of Animal Genetic Resources (Summer 1990);

(b) Preparation of a global action plan on plant genetic resources;

(c) Expansion of Biosphere Reserve Network and other protected areas and enhancement of research on biological diversity, in particular in the tropics;

(d) Allocation of greater resources to taxonomy and training of taxonomists;

(e) Preparation of the second World Conservation Strategy for the 1990s;

(f) Preparation of a framework legal instrument on biological diversity;

(g) Preparation of global biological diversity conservation strategy.

94. Despite progress achieved during the last decade, numerous gaps remain:

(a) Comprehensive worldwide assessment of the status, trends and conservation and utilization needs of biological diversity;

(b) Comprehensive national and international action plan for in situ and ex situ conservation of existing biological diversity;

(c) Better knowledge of economic value of biological diversity and genetic resources;

(d) Specific measures will be needed with regard to tropical forests, which comprise about 70 per cent of the world's species (see chap. IV):

(i) Provide full funding to Tropical Forestry Action Plan, in particular, with regard to the protection of major parts of tropical forests and assistance to indigenous peoples;

(ii) Review and reform sectoral policies that encourage deforestation;

(iii) Integrated approach to protection of biodiversity which strikes a balance between the needs of local populations and protection of genetic resources;

(iv) Improved co-ordination and implementation of the various related conservation conventions, agreements, strategies and action plans.

Chapter VI

ENVIRONMENTALLY SOUND MANAGEMENT OF BIOTECHNOLOGY

95. Biotechnology holds tremendous promise for the alleviation of many problems that currently afflict developing nations, especially the problems of disease and starvation. The growing number of processes to which biotechnology can be applied to satisfy human needs and aspirations for sustainable development makes it an area of global interest. It offers great potential benefits in agriculture, health, industry and the environment by increasing the production of food, energy, chemicals and other raw materials; alleviating or mitigating the problems of health; improving environmental management, leading to new and improved methods of conservation of genetic resources and speeding the evaluation of germplasm for the development of new and unique varieties. Biotechnology has recently been seen as the direct channel for developing countries to practically tap their enormous genetic diversity for sustainable development. The emergence of new biotechnologies is not yet fully appreciated by decision-makers or the public. The socio-economic and environmental impacts require thorough investigation, and any applications contemplated must take into account risks as well as benefits. The precise risks, such as evolution of pathogenic traits or proliferation of antibiotic resistance in micro-organisms, should be properly assessed and monitored. Present obstacles include lack of experience and equipment in developing countries, exacerbated by absence of appropriate regulatory measures governing advances in techniques and ideas for application. Furthermore, new technologies are mostly patented. To balance the likely socio-economic and environmental risks associated with biotechnology application and ensure its prudent management, innovative mechanisms are required to (i) facilitate the development, transfer, and application of modern biotechnology to the problems of particular concern to developing countries; (ii) establish effective co-operation with reciprocal benefits between biotechnology-rich developed countries and gene-rich developing countries; and (iii) anticipate the likely negative impacts of biotechnology and develop appropriate national and international regulatory measures.

96. Many private, public and international organizations are concerned with the development and sound application of biotechnologies relevant to their fields of competence and responsibility. Direct collaboration and rationalization of resources and activities are under way among several United Nations bodies and agencies, in close co-operation with relevant NGOs and institutions in both developed and developing countries, with the aim of extending biotechnology to developing countries.

97. The United Nations system, in co-operation with concerned institutions, provides a forum to review and discuss various biotechnology issues as they relate to agriculture, health, industry and environment. The system monitors recent developments in this field, including privatization of biotechnology and genetic information, field testing and release of genetically modified organisms, and likely socio-economic and ecological impacts of biotechnology application. The joint informal UNIDO/WHO/UNEP Working Group on Biotechnology Safety, the FAO/IAEA

Division of Nuclear Techniques in Food and Agriculture, the MIRCENs network and UNIDO's International Centre for Genetic Engineering and Biotechnology (ICGEB) are important mechanisms in dealing with biotechnology issues. Other elements of the strategy of the United Nations system consist of accelerated technological research, technical assistance, special training and dissemination of information.

A. Microbiological resources centres

98. UNEP and UNESCO established and continue to support regional Microbiological Resources Centres (MIRCENs) in Brazil, Egypt, Guatemala, Kenya, Senegal and Thailand and a global network of national centres. These are centres of excellence for the collection and maintenance of microbial genetic resources in reliable culture collections, as well as for training, research and the application of biotechnologies especially geared to the needs of developing countries. UNEP, in co-operation with other United Nations bodies and agencies, is supporting the World Data Centre on Micro-organisms (WDC) as a global register of information on microbial strains. Likewise, UNEP and UNESCO are providing support to the international Microbial Strain Data Network (MSDN) as a referral system for information exchange and the diffusion of biotechnology. UNIDO is assisting in the development of a Tropical Center for Industrial Environmental Microbiology in Brazil.

B. Environmental management

99. Collaborative efforts through the regional MIRCEN promote pilot projects in areas such as sound biotechnologies for the enhancement of soil fertility, bioconversion of agro-industrial wastes, biological pest and vector control and biodegradation of persistent environmental pollutants. UNIDO and UNEP have been active in the field of bioleaching and environmentally sound management of by-products of the copper industry by using biotechnology. Training of personnel in various areas of environmental and applied microbiology and biotechnology is also provided. The UNIDO/WHO/UNEP Working Group on Biotechnology Safety keeps under review recent developments in biotechnology and formulates and guides the implementation of appropriate recommendations for maximizing the benefits and minimizing the risks of biotechnology application.

C. Agricultural production

100. FAO, in co-operation with other United Nations agencies, has carried out and will continue its support for activities in the following areas: (i) assessment of potential of biotechnology for agricultural production in developing countries; (ii) assistance to member countries in assessing their requirements and the development of biotechnology programmes for crop improvement/protection; (iii) mobilization of resources for institutional and manpower development; (iv) establishment of co-operative networks for optimal use of scarce manpower resources; (v) promotion of exchange of expertise between developed and developing countries; (vi) monitoring of developments in biotechnology; and (vii) animal production and health biotechnology networks in Asia and Latin America.

D. Food production and processing

101. WHO and FAO are promoting activities in (i) examining the impact of biotechnologies on food production and processing; (ii) analysing the implications of the use of biotechnologies for food safety; (iii) identifying real and potential safety concerns and issues specific to the application of biotechnologies; and (iv) recommending appropriate safety assessment strategies and procedures.

E. Research and development

102. UNIDO's ICGEB undertakes research and development in molecular and cell biology for the benefit of developing countries, and strengthens the research capability of its member countries through training courses, workshops and colloquia at its two component laboratories in Trieste and New Delhi. Close contact is maintained with other organizations. Specialized courses in environmental applications of technology are organized on an annual basis. It is envisaged that the research programme will be expanded to include research on environmental biotechnology, subject to extrabudgetary funding (UNIDO's ICGEB/UNEP). An inventory of existing guidelines in ICGEB member countries governing the safe use of recombinant DNA technology is under way.

F. Other relevant activities

103. The ILO programme contains several activities relating to labour and social implications of biotechnology, including its impact on workers' health, environment and employment. Biotechnology and its application are receiving increasing attention from UNDP in country planning and project design as a follow-up to its recent study on biotechnology. UNIDO continues to promote bioleaching and environmentally friendly management of by-products from the copper industry in several developing countries. The Centre for Science and Technology for Development, in co-operation with ICSU and other United Nations bodies, will undertake a regional assessment of biotechnology in Africa. Safety guidelines in biotechnology are being developed within the ECE. UNSO is initiating and reviewing methods of developing improved storing of plant and tree species that can grow well in dryland ecosystems.

G. Other considerations

104. The following major events are planned:

(a) Preparation of a code of conduct for biotechnology as it affects the conservation and use of plant genetic resources (FAO);

(b) Compilation of an inventory of existing regulations governing field testing and uncontained application of biotechnology products (UNEP/UNIDO);

(c) Expansion of the MIRCENs network; four new regional MIRCENs in developing regions, 1990-1995 (UNEP/UNESCO);

(d) Establishment of global data base(s) on environmental releases and biotechnology impacts (UNEP/FAO/UNIDO/WHO/WFCC);

(e) Preparation of harmonized guidelines for good environmental practices of biotechnology, including the release and use of genetically modified and alien organisms into the environment (UNEP/UNIDO/WHO/FAO);

(f) Implementation of biotechnology networks for crop improvement and protection in Asia and Latin America (FAO/UNDP);

(g) Publication of studies related to the impact of biotechnology on workers' health and the environment, and on employment and other socio-economic factors (ILO);

(h) Ongoing research into genetic manipulation to enhance breeding methods of crop plants that are important to the developing world, especially rice, amaranthus and millet (UNIDO's ICGEB);

(i) Pilot applications of environmentally sound biotechnologies in collaboration with MIRCENs, 1990-1995 (UNEP/UNESCO/UNIDO/FAO);

(j) Preparation of reports on ecological effects and likely socio-economic impacts of introducing novel and genetically modified organisms into the environment, 1990-1991 (UNEP);

(k) Preparation of two catalogues of strains of micro-organisms and cell lines for biotechnology applications, 1992 and 1995 (UNEP/UNESCO/WFCC);

(l) Consultations on Biotechnology and Food Safety, November 1990 (WHO/FAO);

(m) International Conference on Global Impacts of Applied Microbiology, 1991 (UNEP/UNESCO);

(n) International Congress on Culture Collections, 1993 (UNEP/UNESCO);

(o) International Symposium on Risk Assessment in Biotechnology, March 1992 (UNEP/UNIDO);

(p) African Regional Workshop on Biotechnology for Production in Dry Areas, 1990 (UNCSTD).

105. The following major activities require acceleration or enhancement:

(a) Acceleration of the drafting of the code of conduct for biotechnology as it affects the conservation and use of plant genetic resources;

(b) Acceleration of the establishment of international data base(s) on environmental releases of genetically engineered organisms and biotechnology impacts;

(c) Acceleration of the development of internationally harmonized guidelines for good environmental practices in biotechnology including the safe release of genetically manipulated organisms;

(d) Strengthening the MIRCENs network, as well as the WDC, MSDN and ICGEB.

106. The major gaps remaining are:

(a) Innovative mechanisms to ensure the transfer of biotechnology and the developing countries' access to it on favourable terms;

(b) Assessment of the environmental and socio-economic impact, including both benefits and risks, of emerging biotechnologies and development of relevant assessment methods;

(c) Internationally harmonized biotechnology regulatory measures, including the safe release of biologically manipulated organisms;

(d) Efficient mechanism for scientific and technical backstopping of regional MIRCENs;

(e) Appropriate and effective interlinkages between the regional MIRCENs network, the WDC, MSDN and ICGEB;

(f) Research into biotechnological development appropriate to the farming systems of the rural poor in marginal areas;

(g) Research and pilot projects on the use of biotechnology to develop plant and tree species of economic value suitable to dryland areas.

Chapter VII

ENVIRONMENTALLY SOUND MANAGEMENT OF WASTES, PARTICULARLY HAZARDOUS WASTES, AND OF TOXIC CHEMICALS, AS WELL AS PREVENTION OF ILLEGAL INTERNATIONAL TRAFFIC IN TOXIC AND DANGEROUS PRODUCTS AND WASTES

107. The wide use of chemicals in industry, commerce and at home and the generation of wastes of all types are two important features of economic development that have a tremendous potential for harming the environment and the health of the people. All countries - whether industrialized or developing - face these problems, but the capabilities of many countries to deal with them effectively are woefully weak. Rapid urbanization and industrialization have outpaced the ability of authorities to cope with the sheer magnitude of solid wastes that are generated daily and need to be disposed of or recycled in an economically and environmentally sound manner. Some of these wastes are particularly hazardous due to their radioactive, toxic, chemically reactive or infectious character and need to be singled out for special handling and disposal.

108. The ever increasing use of chemicals, considered a basic ingredient in industrial progress, requires care and caution in their application and disposal. Meeting the food requirements of expanding populations also requires use of inputs such as pesticides, which are a significant part of the hazardous waste and toxic chemical problem. The risks to health and environment brought about by the use of chemicals in industry and agriculture need to be appraised and chemical safety needs to be assured. Proper information, including prior informed consent, labelling, formulation, application and disposal, are matters which need to be addressed in ways that are technically, economically and socially appropriate. An important problem facing Governments is the transboundary movement of hazardous wastes and the increasing trade in chemicals, and preventing and coping with major industrial accidents. The problems of wastes and chemicals cannot be dealt with as an adjunct to the development and industrialization process, they must be addressed as an inherent part of it.

109. The United Nations system, through the work of various bodies, agencies and programmes, is striving to deal with the various aspects. Work is well under way on conventions and other agreements governing transboundary and trade issues (UNEP, IMO, IAEA, FAO and GATT). Health and environmental risk evaluations of chemicals and other chemical safety problems are being addressed by the WHO/ILO/UNEP International Programme on Chemical Safety, by the WHO/FAO Expert Committees on Pesticide Residues in Food (see chap. IX) and the International Agency for Research on Cancer, while UNEP's IRPTC is involved with the collection and dissemination of information on chemicals and hazardous wastes and UNESCO with studies of the problems created by wastes in marine, land and aquatic environment. UNIDO, UNEP, FAO and others are dealing with technologies for waste minimization, which is the ultimate aim, and for treatment and disposal. UNCHS is concerned with solid waste management. At the country level, UNDP, through the agencies, is assisting Governments to strengthen their capacity for waste management. The prevention of and emergency response to technological accidents, i.e., radiological or chemical, is being addressed by UNDRO, IAEA, UNEP, WHO, ILO and others. Although there are no formal co-ordination mechanisms, most of the activities undertaken by the United Nations system are collaborative efforts among agencies.

A. Environmentally sound management of wastes, including hazardous wastes

110. The following activities are ongoing with regard to wastes:

(a) Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal. Co-ordinated by UNEP, the Convention was adopted in March 1989 by 116 States in Basel. The interim Secretariat has been established at UNEP to prepare the ground for the implementation of the Convention. Efforts are being made in 1990/91 to obtain the required 20 ratifications and make organizational arrangements necessary for the Convention to enter into force;

(b) The 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (see chap. III), is the global instrument for the control of marine pollution. Consideration of the long-term strategy of the London Dumping

Convention will be addressed by the 13th consultative meeting of the contracting parties in October/November 1990 (IMO);

(c) An International Code of Practice for Transboundary Movement of Radioactive Waste. The IAEA Board of Governors reviewed the draft in June 1990 and it is being submitted to its General Conference in September 1990 (IAEA);

(d) International Cleaner Production Information Clearing House is being established to facilitate the transfer of information on low waste technology (UNEP/UNCSTD/UNIDO/UNDP/ILO) (see chap. X);

(e) Transfer of technology and industrial rehabilitation are being accorded high priority in the areas of hazardous waste generation, handling, transport and disposal, as well as in related areas of industrial safety and risk management (UNIDO);

(f) New sustainable methodologies and practices for sustainable waste disposal are being developed (UNCHS/Government of the Netherlands);

(g) Regional strategy for integrated waste management is being prepared (ECE);

(h) Expert Consultation on Disposal of Bulk Quantities of Pesticides (FAO, 1990).

B. Environmentally sound management of toxic chemicals

111. Activities involving toxic chemicals include:

(a) London Guidelines for the Exchange of Information on Chemicals in International Trade, including the prior informed consent procedure. This was adopted by UNEP Governing Council decision 15/30 and is being jointly implemented by FAO and UNEP;

(b) Consolidated list of products whose consumption or sale have been banned, withdrawn, severely restricted or not approved by Governments. Work on this is being co-ordinated by the Department of International Economic and Social Affairs;

(c) FAO's Code of Conduct on the Distribution and Use of Pesticides. Additional guidelines and standards will be produced to support the implementation of this Code of Conduct, which also include the prior informed consent procedure. This will include prevention of ground-water contamination by pesticides and safe disposal practices and establishment of relevant standards on pesticide residues. FAO technical assistance projects and the FAO/UNEP series of training courses on correct use and safe handling of pesticides in developing countries continue. FAO and WHO are collaborating in other aspects of safe use of pesticides (see also chap. IX);

(d) International Programme on Chemical Safety (IPCS). This international programme, operated by WHO/UNEP/ILO for over 10 years, has been conducting health

and environmental risk evaluations of potentially toxic chemicals and other chemical safety issues such as poisonings by chemicals, accidents and institutional development;

(e) International Register of Potentially Toxic Chemicals (IRPTC). The Register, operated by UNEP, provides information on technical and legal aspects of chemicals, which is disseminated through a global network;

(f) Protection of workers from chemicals and hazardous products and wastes. ILO continues to work towards ensuring occupational safety and health in the working environment, including preparation of a draft Code of Practice in the Prevention of Major Industrial Hazards (October 1990) and consideration by the ILO governing body of "Prevention of Industrial Accidents" as a possible subject for new instruments.

C. Other considerations

112. Some major upcoming events are:

(a) A review by the UNEP Governing Council to consider further strengthening of the London Guidelines and the need for a convention, May 1991;

(b) WHO Commission on Health and Environment which will review, inter alia, health aspects of hazardous wastes and toxic chemicals - first meeting, June 1990; final meeting, June 1991; report available, September 1991;

(c) Review of the implementation of the provisions of the Basel Convention by the General Assembly at its forty-fifth session - September 1990;

(d) First meeting of the Conference of Contracting Parties of the Basel Convention (anticipated in 1991);

(e) Final consideration of new international labour instruments on safety in the use of chemicals at work by the ILO Conference (June 1990).

113. Certain major activities require acceleration or enhancement:

(a) Ratification and full implementation of the Basel Convention;

(b) Enhanced assistance to developing countries for the management of wastes is necessary. Effective and co-ordinated actions are required to study and monitor the problem of solid waste management in developing countries, with an emphasis on approaches for waste minimization, recycling and reuse, and energy generation therefrom;

(c) Ways and means to expand international co-operation in relation to, inter alia, information exchange, testing and risk assessment of chemicals. Further development of programmes and networks to enhance awareness and preparedness and to provide assistance in case of industrial emergencies involving

chemicals should be promoted. System-wide attention should be paid to enhancing developing countries' capabilities in chemical management;

(d) The extension of the International Code of Conduct on the Distribution and Use of Pesticides and its guidelines and standards to support the implementation of the Code at country level; the implementation of PIC procedures for pesticides in the developing countries and reduction in the overuse of pesticides in developing countries through integrated pest management techniques;

(e) Enhancement of activities connected with the review of the practice of incineration of wastes at sea.

114. The major gaps that exist are:

(a) Safe management of chemicals, including pesticides, as an integrated concept and further improvement of system-wide co-ordination;

(b) System-wide co-ordination to effectively cover the issues and activities in solid waste management and to monitor the relevant sectors in developing countries is urgently needed;

(c) Site selection for a facility for the disposal of high-level radioactive waste.

Chapter VIII

IMPROVEMENT OF THE LIVING AND WORKING ENVIRONMENT OF THE POOR IN URBAN SLUMS AND RURAL AREAS, THROUGH ERADICATING POVERTY, INTER ALIA, BY IMPLEMENTING INTEGRATED RURAL AND URBAN DEVELOPMENT PROGRAMMES, AS WELL AS TAKING OTHER APPROPRIATE MEASURES AT ALL LEVELS NECESSARY TO STEM THE DEGRADATION OF THE ENVIRONMENT

115. Poverty and environmental degradation are inextricably linked because there are few alternatives for the poor to meeting short-term needs for food, housing and fuel. Over 1 billion people in developing countries lack adequate shelter, safe drinking water, sanitation installations, waste disposal services and health, educational and recreational facilities.

116. The United Nations system is devoting increasing attention to alleviating poverty - e.g., the World Bank's World Development Report (1990), IFAD's State of World Rural Poverty (1991), and UNDP's Human Development Report (1990).

117. Mounting pressures on scarce resources, combined with inappropriate policies and institutions, and the marginalization of the poor in ecologically sensitive areas, have brought about an increase in the frequency and magnitude of natural disasters, in which the poor are frequently among the main victims.

118. Specific problems of the rural poor are the depletion of energy resources, especially fuelwood, lack of employment and income opportunities, limited access to land and to agricultural inputs - including credit and extension services and government policies - resulting in a heavy exodus of rural poor to the cities. The rapid urbanization of the poor, combined with other distortions in urban planning, produces imbalances in the proportion of population to natural resources with immense negative impacts on the environment. A particular problem is caused by international emigration and refugees.

119. Despite the unprecedented growth of population in recent decades, food security has been met on a global basis through an enormous increase in world agricultural production. However, this increase did not take place at the national household level in many developing countries, particularly in Africa, where food production has been generally declining in recent years. Rapid population growth in developing countries and excessive migration from rural to urban areas frequently outpace government efforts to provide the necessary services, thus reinforcing environmental degradation. Its effects are particularly felt in urban areas where the demand for land, housing and shelter services are increasing dramatically (see chap. X).

120. The natural and the built environment are interdependent and interrelated. Likewise, the living and working environment of the poor cannot be separated from socio-economic and physical conditions, particularly access to land and resources, pricing, financing mechanisms and transfer of technology (see chaps. IV and X). A comprehensive perspective is indispensable to guide sustainable development strategies.

121. The general objective of the activities of the United Nations system is to improve living and working conditions for all, but especially the rural and urban poor, by increasing opportunities for participation, choice and mobility by all segments of national populations, expanding access to income-generating employment for men and women alike, promoting sustainable use of natural resources of all kinds, and securing equitable access for all to shelter and services through enabling mechanisms.

122. This means: the provision of shelter, transportation, energy, water, sanitation and solid waste disposal (UNCHS), the sustainable use of natural resources (FAO, IFAD, UNFPA, UNESCO, UNCTCD, UNCHS, UNEP), the promotion of environmental and occupational health (ILO, WHO), the development of small and medium-sized industries in rural areas (UNIDO), promotion of employment and income opportunities (ILO, UNIDO, IFAD, UNDP) and the rationalization of population growth and distribution patterns (UNFPA). In co-operation with other organizations, FAO leads the United Nations system's efforts in the field of rural energy.

123. The United Nations system uses different fields of competence to tackle these issues. The Committee on World Food Security (CFS), serviced by FAO with the participation of 98 member countries, addresses many issues pertaining to food security and sustainability. Funding agencies play a crucial role as catalysts for sustainable development through their programmes aiming at alleviating poverty, hunger and malnutrition. The specific knowledge of the International Fund for

Agricultural Development (IFAD) regarding the nature, causes and dynamics of rural poverty serves as the basis for projects which act as catalysts for sustainable increases in rural food production and nutrition incomes through management, by beneficiaries, of the natural resource base. Co-ordination is pursued through a number of joint efforts in all these areas within the framework of existing action plans, programmes and decades. In particular, the ACC Task Force on Rural Development and the ACC Task Force on Long-Term Development Objectives support co-ordination among the many United Nations bodies and agencies concerned with the alleviation of poverty.

A. Poverty alleviation

124. The eradication of poverty is a major objective of all development efforts. At the same time, it has long been recognized that poverty is a major cause of environmental problems. Substantial efforts within the United Nations system are devoted to the eradication of poverty, involving a wide range of organizations. It is not feasible to provide information on all United Nations activities, and therefore the following summarizes a few of the relevant activities in this area. Poverty alleviation through integrated rural development is a major concern in the Cairo Programme for African Co-operation, adopted by the first African Ministerial Conference on the Environment (AMCEN). A similar programme is also being launched for Latin America and the Caribbean and an Action Plan is currently being developed along the lines of the Cairo Programme (UNEP, ILO, DTCD et al.).

125. The promotion of employment and income generating opportunities as well as improvement of the working and living environment for the rural and urban poor are addressed through ILO's World Employment Programme (WEP) and Programme for the Improvement of Working Conditions and Environment (PIACT).

126. FAO is promoting the development of comprehensive national food security programmes. Under the Food Security Assistance Scheme, food security and programming missions are organized to support interrelated production, storage, marketing and nutrition based interventions suited to local conditions. FAO provides technical assistance to look into policy aspects and programmes that promote food security and to strengthen national institutions and capabilities in this area. The FAO Global Information and Early Warning System continuously monitors the crop and food supply outlook in developing countries and alerts Governments and international agencies whenever food supplies are threatened and external assistance is needed to avert deterioration of nutritional status among vulnerable groups.

127. IFAD finances projects which put emphasis on building up food security from the grass roots by targeting the poorest of the poor. It aims at enhancing the productivity of smallholders through environmentally sound methods and at creating income-generating activities for those without or with little land, with special attention to the needs of women.

128. Many activities focus on the situation of women and vulnerable groups. A Special Action Plan on Women in Development was adopted by the FAO Conference (1989) and is being implemented. Also programmes are implemented with the aim of improving the living conditions of refugees in major refugee hosting countries through the creation of income-generating activities and development aid (UNHCR, World Bank, IFAD).

B. Living environment

129. It is recognized that the environment that is most intimate to human beings comprises shelter and neighbourhood. This takes on particular importance for the poor, and deficiencies in this micro-environment not only seriously affect women and children, as the most intensive users of shelter, but also place strain on the natural resources of the surrounding environment.

130. The Global Strategy for Shelter to the Year 2000 emphasizes the shelter needs of lowest-income groups (UNCHS and all United Nations bodies and agencies). The Urban Management Programme will develop a policy framework to improve living and working environments for the poor through both preventive (i.e., city growth strategies) and remedial (i.e., improved shelter, basic sanitation, solid waste collection) measures and guidelines and other tools to implement such measures (UNHCS/UNDP/World Bank).

131. Under the Man and Biosphere (MAB) programme, dealing with ecological approaches to urban planning and management, interdisciplinary natural and social science research will continue in 1990-1991 (UNESCO).

132. WHO's global Healthy Cities Project, building upon its successul start in the European region, works on both political and technical levels to promote the self-reliant capacity of the community to improve services, attitudes and environmental conditions that are important to health. WHO is also developing health criteria for application in the planning and management of housing and development projects.

133. The UNDP Metropolitan Environmental Improvement Project will examine alternative strategies to improve the quality of the urban environment in selected cities in Asia.

134. The primary role of WFP food aid is to improve the living conditions of the poor by helping them meet the initial expenses of environmentally related activities that will produce lasting benefits through poverty-focused projects related to land/water management and community development.

C. Other considerations

135. Major upcoming events are listed below:

(a) Preparation of the international development strategy;

(b) Urbanization panel (June 1990-March 1991) of the WHO Commission on Health and Environment. Panel will report on the health burden relevant to the living and working environment and strategies for attaining health through environmental improvement;

(c) Ten regional intergovernmental seminars in connection with the Global Strategy for Shelter to the Year 2000 will be held in South and East Asia, Africa, the Caribbean and Eastern Europe in 1990, and one seminar will be held in Latin America in 1991 (UNCHS);

(d) Report to IFAD Governing Council (January 1991) entitled "Environmental sustainability and rural poverty alleviation" on how the Fund can best address the relationship between environmental sustainability and rural poverty alleviation in its projects; the financial implications of strategies for addressing the environmental constraints and opportunities facing the rural poor; and the alternative means by which these financial requirements might be met.

136. Certain major activities require acceleration or enhancement:

(a) Based on the experience from the Healthy Cities Project in the European region, the Global Healthy Cities Project should be accelerated, in order to promote and exploit the self-reliant capacity of the community to improve services, attitudes and environmental conditions that are important to health;

(b) Incorporation and adaption of environmental impact assessment techniques to agricultural and rural development;

(c) Study of the environmental impacts of structural adjustment on agriculture and rural development;

(d) Development of sustainable water supply and sanitation policies, and of programmes for recycling of solid wastes (see chap. II).

137. Major gaps are listed below:

(a) Research into the opportunities for and constraints on reversing the negative linkages between rural poverty and environmental degradation;

(b) Development of options for management of scarce land resources in developing countries (see chap. IV);

(c) Insufficient research on traditional crops under resource-poor conditions;

(d) Biotechnology research relevant to small-farm agricultural systems (see chap. VI);

(e) Information systems - i.e., monitoring and assessment of environmental conditions significant to health, and the resultant health burden.

Chapter IX

PROTECTION OF HUMAN HEALTH CONDITIONS AND IMPROVEMENT OF THE QUALITY OF LIFE

138. The relation of health to sustainable development is reciprocal: sustainable development depends on the good health of economically productive people while the achievement of health for all depends on the sustainable use of the world's resources and on sustainable social and economic development. It involves the sustainable use of natural resources for reliable food supplies and energy for human development, for healthy cities and for the prevention of environmental health risks which originate in the development process itself. It also requires the control of endemic diseases in relation to development, including diarrhoeal diseases, the meeting of basic health needs such as food, drinking-water and shelter, improvements in the working environment and the protection of health of specific population groups, including mothers, children, adolescents, and the elderly. These goals are pursued through primary health care which is the democratic, participatory and equitable approach to sustainable development.

139. Health is a basic human need and an integral aspect of the quality of life. In the pursuit of health, Governments and society have given urgent attention to relieving man of the burden of preventing disease and premature death. However, there is a continuing need to consider and strive for health in a positive sense so that man may have the opportunity to develop his potentials to the fullest extent.

140. The issue of protection of human health and the improvement of quality of life is a "cross-cutting" environmental issue. It is intrinsically linked with other environmental and developmental concerns, although to varying degrees. Environmental issues related to quantity and quality of fresh water, toxic chemicals, the living and working environment, and atmosphere are directly linked with issues of health protection. The work on health issues related to any of the individual environmental issues considered is presented in other chapters. This chapter highlights those activities in the health protection field which are concerned with the broader issues of environment, development and health.

141. The United Nations system, particularly through WHO, but with strong contributions from UNEP, ILO, UNCHS, UNDP, FAO, IFAD, UNIDO, UNICEF, UNFPA and some other bodies and agencies, works towards ensuring that basic health needs are met, that people not only contribute to development but are also the beneficiaries of development it works towards, the prevention and control of environmentally related diseases, the protection of people against environmental health risks which originate from the development process itself, and the prevention of such risks. There are no specific formal co-ordination mechanisms within the United Nations system for this area; there are, however, numerous inter-agency programmes and projects.

A. Review of health/environment/development relationships

142. The following major activities are ongoing:

(a) WHO Commission on Health and Environment. This Commission, established in the spring of 1990, is conducting a comprehensive review and assessment of the consequences to human health of present and foreseen environmental determinants associated with socio-economic development. The Commission will assess current conditions, indicate trends that may occur over the next two decades, identify research needs for the future, and will address priorities and approaches for dealing with them. The work of the Commission is being supported by four separate expert panels which address "developmental driving forces" on energy, urbanization, food and agriculture, and industry and their impacts on health. All relevant agencies are participating in this work;

(b) The first European Conference on Environment and Health, held in December 1989, agreed on a European Charter on Environment and Health. The Charter indicates priority concerns and calls for increased collaboration between environmental and health sectors. A number of follow-up activities are under way;

(c) UNDP has completed its work on the preparation of the Human Development Report (1990). The report spells out the strategies for human development in the 1990s, focusing on the restructuring of budgetary expenditures, and on the need for an international economic and financial environment that is conducive to human development;

(d) Work is under way on the preparation for the Third International Conference on Health Promotion, which will be held in June 1991. The purpose of the Conference, which is being organized by WHO in collaboration with the Nordic countries, is to find practical ways to solve biological, economic and managerial problems that arise in creating supportive environments for health. The report is to be presented at the World Health Assembly in May 1992;

(e) Efforts are under way to convene an International Conference on Nutrition in late 1992 or early 1993 which would identify the problems of malnutrition, develop and adopt a strategy and proposals for action to combat malnutrition, increase public awareness of its magnitude, causes and consequences and establish a global system of collecting and disseminating, on a yearly basis, changes in the nutrition status of population groups at risk;

(f) The convening of an Expert Group Meeting on Environmental Health and Housing, aimed at examining relevant issues underlying their interrelationships and defining a programme of research to address the urgent gaps in knowledge (UNCHS, WHO);

(g) Many of the ILO's conventions and recommendations and its occupational safety and health programme support improvements in the working environment which contribute to improved health.

B. Health risk evaluation and establishment of standards

143. Some of the numerous programmes and projects are outlined below. Many additional activities regarding chemicals and hazardous wastes such as those carried out by IPCS and IRPTC are described in chapter VII:

(a) Through the Joint FAO/WHO Codex Alimentarius Commission, work has been proceeding on developing internationally agreed food standards and maximum residue levels for pesticides and other agro-chemicals, and on establishing maximum levels for environmental contaminants. Meetings of the Codex Committee on Pesticide Residues and panels of experts continue to address these topics (FAO, WHO and UNEP). At the request of the Commission, FAO and WHO, in collaboration with GATT, will convene an International Conference on Food Standards, Chemicals in Food and Food Trade, to review the Food Standards Programme and set priorities for the last decade of the century. The conference will aim, inter alia, to foster closer collaboration between food-exporting and food-importing countries and to commit Member States to accept foods which have been produced according to Codex codes of practice and which comply with Codex standards;

(b) GATT has established a working group to examine trade-related aspects of products whose sale and/or consumption is banned or severely restricted in the country of export on the grounds that they are harmful to human, animal or plant health or the environment. The group will report its findings to the GATT Council by 30 September 1990;

(c) Health risk evaluation of exposure to ionizing radiation is being carried out by UNSCEAR, IAEA, WHO, ILO and others. Priority action is being devoted to the development of improved procedures for preventing and dealing with radiological accidents.

C. Environmental management for pest and vector control

144. Efforts are continuing to extend the use of environmental management measures for vector control within health programmes and in development projects, as described below:

(a) The WHO/FAO/UNEP Panel of Experts on Environmental Management for Vector Control has been instrumental in this effort. The FAO/UNEP Panel of Experts on Integrated Pest Control provides advice on policies and practices for the promotion and implementation of environmentally sound approaches to pest control in agriculture and to promote joint research programmes for the control of pests of major international significance. Furthermore, FAO and IAEA collaborate on research in tracing pesticide residues and use of the sterile insect technique for controlling some pests. FAO and IFAD pursue the promotion of Integrated Pest Management in their projects;

(b) FAO, IFAD, UNDP and IAEA are launching a pilot project for the eradication of screw worm through the Sterile Insect Technique (SIT) to test operational aspects of the logistics and technologies to be used;

(c) As part of its rural poverty alleviation activities, IFAD is financing the pilot phase of a biological control project to eradicate the new screw worm which has recently infested North Africa. It is also financing biological control projects for locusts and the cassava mealy bug.

D. Environmental health management

145. Environmental health management is the subject of numerous programmes and projects:

(a) The health-related monitoring component of GEMS covers urban air quality, water supplies, food contamination, and human exposure and is implemented by UNEP/WHO/UNESCO/FAO/WMO. These activities provide information on levels and trends in pollution in different countries;

(b) WHO is establishing world-wide networks for education, training and research in environmental health. Eventually, there will be four such networks dealing with environmental epidemiology, exposure assessment, control technology and environmental planning. They will be used for strengthening local capacities for education, training and research on environmental pollution and related health problems;

(c) Health issues related to water and sanitation are described in chapter II (UNDP, World Bank, WHO and international support agencies);

(d) A major focus of the research and development programme at UNIDO's ICGEB is on human health, with emphasis on vaccine production and on combating parasitic and viral diseases afflicting developing countries.

E. Other considerations

146. Certain major upcoming events are:

(a) WHO Commission on Health and Environment - first meeting, June 1990; final meeting, June 1991; report available, September 1991;

(b) Seventh International Congress of Parasitology, Paris - August 1990;

(c) International Conference on Food Standards, Chemicals in Food and Food Trade - March 1991 (tentative);

(d) Third International Conference on Health Promotion, Sundsvall, Sweden - June 1991;

(e) FAO/WHO International Conference on Nutrition, to be held in late 1992 or during the first half of 1993 at a venue yet to be determined;

(f) Meeting of Commission on African Animal Trypanosomiasis and Joint Meeting of Expert Panels, Harare, February 1991.

147. Certain major activities require acceleration or enhancement:

(a) Expansion and improvement of the collection of health-related monitoring data through GEMS;

(b) Development of economically efficient and fully field-oriented integrated pest management adapted to the local agro-ecological and socio-economic conditions, through, inter alia, expansion of the work of the WHO/FAO/UNEP Panel of Experts on Environmental Management;

(c) Further elaboration and actions regarding malnutrition;

(d) Enhanced action to improve the working environment which will also protect the natural environment, including improved collaboration between labour/factory inspectorates and environmental inspectorates.

148. Major gaps exist, as follows:

(a) Lack of epidemiological information from developing countries on health effects of environmental hazards;

(b) At the national level, identification of insufficient linkages among health, environment, human settlements and development-related institutions;

(c) Insufficient attention paid to monitoring and assessing the impact of pesticides, fertilizers and industrial activities on human and environmental health;

(d) The development of an economically efficient integrated pest management system package adapted to local agro-ecological and socio-economic conditions in rural areas.

Chapter X

DEVELOPMENTAL DRIVING FORCES

149. A number of developmental driving forces (population, energy, transport and industrialization) are essential to the welfare of society but at the same time have major impacts on the environment. Finding a balance between the positive and negative impacts of these sectors of activity will be crucial to achieving sustainable development. While not specifically singled out in General Assembly resolution 44/228, these critical areas deserve attention by the Preparatory Committee.

A. Population

150. People are the most valuable asset to better economic and social conditions and the quality of life. However, in many countries, continued population growth and unmanaged urban growth lead to serious imbalances between the resource base, the environment and economic development, that reinforce a treadmill of ill health, malnutrition, income inequality, social unrest and environmental degradation.

151. The United Nations Population Fund (UNFPA) helps member States resolve problems related to undesirable population trends, providing assistance in policy research, institutional and human resource development, maternal and child health care and family planning and public awareness. Other organizations active in the field are WHO, UNCHS, UNU, UNICEF, ILO, UNDP, World Bank and United Nations/DIESA.

152. Some of the major ongoing activities are:

(a) A document on population and environment will be provided to the Preparatory Committee after review by expert groups (UNFPA, DIESA);

(b) Studies are being undertaken on population in national development planning; population and environment; population and land-carrying capacities; population and energy requirements (UNFPA);

(c) The State of World Rural Poverty study will focus, inter alia, on demographics (IFAD);

(d) The Human Development Report (1990) (UNDP);

(e) The following UNFPA State of World Population reports (1990):

(i) "Links between women, population and environment - Three country case studies", by UNFPA/United Nations Research Institute for Social Development;

(ii) "Simulation model and planning methodology for policy analysis of integrated population, technological and economic development - application and testing in Mauritius", by UNFPA/International Institute for Applied Systems Analysis;

(iii) "Guidebook on population, natural resources and development", by UNFPA/World Conservation Union;

(iv) "Population and land-carrying capacity study for selected countries in Africa", by UNFPA/FAO.

153. An international meeting on population is to be held in 1994.

154. The following major activities require acceleration and enhancement:

(a) The Amsterdam Declaration (1989) of the International Forum on Population in the Twenty-first Century set out targets and goals and emphasized areas that require enhancement, such as reduction in average number of children per woman, reduction of the rate of infant and maternal mortality, and better distribution of population within countries;

(b) Increased efforts to collect, analyse and disseminate data for policy formulation expansion of management training and research.

155. Certain gaps necessitate priority activities:

(a) Lack of financial resources for family planning and other population activities in developing countries;

(b) More Governments should integrate population issues into development planning.

B. Energy and transport

156. Energy is essential for health and economic development, but its use has adverse environmental consequences. In the past the beneficial health and social impacts have far outweighed the adverse impacts, and the per capita consumption of energy has been taken as an indicator for economic development. Growing awareness of the problems related to fossil fuel consumption (acid rain, greenhouse gases, fuel-wood consumption, deforestation and desertification), the transport of liquid fuels (oil spills), mining (accidents) and nuclear energy (Chernobyl accident) has led to calls for energy efficiency and the development of environmentally benign energy sources, but not to significant changes in energy policies. This is an area where patterns of consumption vary drastically between developed and developing countries.

157. Transportation - closely linked to energy supply and use - is also an essential part of the development process. Its impact on the environment and on human health ranges from the urban air pollution to impacts from construction of the transportation infrastructure.

158. There are a number of United Nations bodies and agencies dealing with different aspects of energy production and use, but no global agency dealing with all forms of energy. An Inter-agency Task Force deals with new and renewable sources of energy and an Inter-Agency Committee deals with response to nuclear accidents. The environmental aspects of transportation are of concern to the two specialized agencies with specific mandates in the field of transportation, ICAO and IMO, as well as to WHO, UNCHS, UNEP, the regional commissions and a number of other bodies and agencies of the United Nations system.

159. The major ongoing activities are listed below:

1. Energy

(a) Promotion of the development and transfer of new technologies (solar, wind small hydropower, conversion of biomass) (UNIDO, ECE, UNU, FAO, UNDP, UNESCO);

(b) Energy planning - integration of environmental considerations and technical co-operation with countries to introduce locally available, sustainable energy sources - FAO, ILO, UNDP, UNIDO, World Bank, UNDTCD, IAEA, regional commissions, UNEP;

(c) Implementation of the Vienna Convention on Early Notification of a Nuclear Accident and on Assistance in the Case of a Nuclear Accident or Radiological Emergency - IAEA, WHO, WMO, ILO, UNDRO;

(d) Establishment of safety standards and guidelines for planning, siting, and operation of nuclear power plants; advisory missions - IAEA/WHO/ILO;

(e) Promotion of energy conservation and energy efficiency (UNIDO, ECE, UNCHS, UNEP, FAO, DIESA, DTCD, UNESCO);

(f) Afforestation and reafforestation to meet the demand for fuel wood, particularly in dryland (FAO, UNSO, World Bank);

(g) United Nations University is actively involved in the establishment of a network of centres of excellence in the area of new and renewable sources of energy.

2. Transportation

(a) Development of conventions, codes, standards and guidelines for the prevention and control of pollution from ships (IMO);

(b) Transfer of information on the effects of aircraft noise and aircraft engine emissions and on appropriate regulatory action and measures regarding airports and their operation (ICAO);

(c) Health and environmental risk assessment of emissions from motor vehicles and other sources of transportation as a basis for national standards (UNEP, WHO, ECE, UNCHS);

(d) Establishment of emission standards for road vehicles and guidelines for road construction, and implementation of the Convention on Civil Liability for Damage Caused During the Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels (ECE);

(e) Promotion of use of alternative fuels (UNIDO).

160. The following major events are planned:

(a) Senior Expert Symposium on Electricity and the Environment (Helsinki, 13-17 May 1991) will forward its conclusions to the Preparatory Committee - co-sponsored by CEC, CMEA, IAEA, IEA, IIASA, OECD/NEA, ECE, UNEP, World Bank, WHO and WMO;

(b) The International Conference on Nuclear Safety (1991) will address issues raised in the WCED report on the acceptability of nuclear energy and make recommendations for action to IAEA's General Conference;

(c) The Expert Panel on Energy will formulate recommendations for the WHO Commission on Health and Environment (see chap. IX, para. 3 (a));

(d) A forthcoming Diplomatic Conference on Oil Pollution. Preparedness and Response is referred to under chapter III (IMO).

161. Certain major activities require acceleration or enhancement:

(a) Assistance and advice from the international community in assessing and mitigating the long-term consequences of the Chernobyl accident requires a co-ordinated and rapid response. Lessons learned should be applied in other environmental disasters;

(b) There should be more dialogue between energy and environmental specialists (national and international);

(c) Intensify co-operation in developing new energy strategies and in promoting the transfer of energy-efficient and clean technologies, including new technologies to meet rural energy requirements;

(d) Development of affordable, environmentally sound energy-efficient urban transportation systems.

162. The following major gaps have been identified:

(a) There is no United Nations institution with global membership dealing with energy policy. This gap is particularly seen in the area of fossil fuels, by far the most environmentally damaging (see also chap. I);

(b) More formal co-ordination among United Nations agencies and between the United Nations and intergovernmental organizations and other expert organizations in the energy field should be established. The co-operation established in preparing for the Helsinki Symposium should be further developed;

(c) No forum exists within the United Nations system to consider and establish policies to optimize transportation and energy systems.

C. Industrialization

163. In developing countries, environmental degradation is closely related to poverty and underdevelopment. The promotion of economic and social development, for which industrialization is an indispensable vehicle, is an essential factor in the protection of the environment. Sustained industrial development and effective environmental protection are therefore complementary rather than competitive objectives. Concern for the human environment must become a basic element in industrial development planning.

164. Environmental protection and resource conservation policies and programmes are seen as a basic element of industrial development but developing countries are faced with significant constraints in achieving this: (i) lack of experience in dealing with environmental problems; (ii) inadequacy of the existing institutional infrastructure for monitoring environmental quality and health standards; and (iii) constraints in terms of the economic resources available.

165. Industry has responded, in some instances, by developing new low-waste technologies and processes. Yet the very complexity of the causes and effects of pollution require still more urgent and concerted efforts. The solutions adopted by industry are often based on short-term economic considerations. In future, industrial operations will have to be designed to create less pollution, eliminate or reduce waste, utilize renewable rather than non-renewable resources and minimize irreversible adverse impacts on human health and the natural environment.

166. The objective of the United Nations system is to ensure the environmental sustainability of industrial development and to maximize the beneficial impact of industry on the quality of life by minimizing its adverse environmental effects.

167. International co-operation focuses on: (i) research into and development of environmentally sound technologies; (ii) exchange of experience and knowledge; (iii) promotion and transfer of technologies for the protection and improvement of the environment in developing countries in accordance with their national objectives and policies; and (iv) mobilization of financial resources to support these activities.

168. The agency responsible for industrial development in the United Nations system is UNIDO, whose primary objective is the promotion and acceleration of industrial development in the developing countries. However, other agencies such as UNDP, DTCD, ECE, ILO and UNEP are also involved in this area. In considering the environmental implications of industrialization, especially close ties are maintained with UNEP's Industry and Environment Office.

169. Major ongoing activities are concerned with:

(a) The transboundary impact of industrial accidents: preparation of a legal instrument focusing on, inter alia, prevention; exchange of information and harmonization of procedures; early warning and notification; damage assessment, containment and restoration; and exchange of technology, to be ready by 1992 (ECE) (see chap. XI);

(b) Environmental risks of industrial accidents and pollution including undefined high risks industries: assessment of health and environmental risks of pollution and promotion of health-based control standards for environmental quality and for adequate chemical safety (WHO, ILO, UNEP); promotion of a cleaner production network and of the APELL programme on industry, and community preparedness to deal with industrial accidents (UNEP) (see chap. VII). The strengthening of industry-related environmental impact assessment, remote sensing, non-destructive testing, industrial accident prevention techniques and management and industrial occupational safety and health, as well as implementation of activities in industrial rehabilitation and in the promotion of clean, low-waste, energy-efficient, and recycling or reuse technologies (UNIDO); reduction-treatment of industrial and transport gaseous emissions, reinjection of waste fluids back into geothermal reserves, analysis of environmental impacts of small and large-scale mining and disposal/treatment of resulting solid and liquid wastes (DTCD); Sectoral Activities Programme on issues related to both the working and general environment in key sectors, e.g. chemicals, petroleum, mining, forestry and iron and steel (ILO);

(c) Dissemination of information: promotion of the transfer of information between industry and government for environmentally sound industrial development through periodic technical publications, guidelines, diagnostic studies and planning (UNEP).

170. Certain major activities require acceleration or enhancement:

(a) Development of conceptual and decision tools for use of industrial planners in developing countries in formulating policies leading to sustainable industrial development;

(b) Work on an international legal instrument and co-ordination of appropriate emergency response mechanisms for industrial accidents;

(c) Development, transfer and adoption of clean, low- or non-waste, energy-efficient and recycling and reuse technologies (see chap. VII);

(d) Enhancing the capabilities of developing countries to analyse, monitor and regulate the environmental impacts of industrial processes;

(e) Development of small- and medium-scale industries and intensification of rural industrialization;

(f) Activities enabling conclusion of, entry into force of and compliance by both developed and developing countries in international agreements such as the Basel Convention, Montreal Protocol, Cairo Guidelines, and the forthcoming Climate Convention (see also chap. II);

(g) Accelerate rehabilitation of existing industries, including those in Eastern Europe.

171. The following major gaps have been identified:

(a) Appropriate mechanisms for the transfer of patented or otherwise inaccessible technologies, especially non-CFC technologies, to developing countries on soft or concessional terms;

(b) Mechanisms for securing additional financing for inclusion of environmental aspects in industrial development projects without diverting existing resources for that purpose (see chap. XI);

(c) Comprehensive frameworks governing occupational safety and health in industrial activities in developing countries;

(d) Consistent application of the "polluter pays" principle to all industrial activities to ensure that the source of environmental damage is held accountable for damage caused.

Chapter XI

CROSS-CUTTING ISSUES AND INTEGRATIVE MECHANISMS FOR SUSTAINABLE DEVELOPMENT

172. Many of the activities and gaps identified in the previous chapters cut across several priority areas. It has nevertheless been felt useful to devote a special chapter to those cross-cutting issues which have not been dealt with in a comprehensive manner, namely, the instruments for achieving sustainable development, for environmental monitoring and assessment, of international environmental law and international funding.

A. Instruments for achieving sustainable development

173. Achieving environmentally sound development requires the integration of environmental considerations into national planning and decision-making. This calls for strong political commitment and the use of reliable information; appropriate legislation, policies and institutional arrangements; environmental management tools, such as environmental assessment, risk analysis and environmental accounting; education and training; awareness building and information; and public participation. Externally supported structural adjustment and economic recovery programmes can also play a positive role, if more attention is paid to sustainable development objectives.

174. The United Nations system is seeking to: (i) ensure that the planning, design and implementation of economic and social development policies, programmes and projects are accelerated and take into account environmental opportunities and constraints; (ii) assist countries to enact and implement national environmental law and to strengthen their environmental institutions, (iii) mobilize human resources for promoting sustainable development and environmental protection through general education, sensitization of occupational and social groups and

training of environmental specialists, technicians and managers, and (iv) to develop greater public awareness and create attitudes so as to influence policies and actions in support of sustainable development and environmental quality.

175. UNEP, UNDP, UNCHS, World Bank, UNDTCD, FAO, UNIDO, ILO, UNCTAD and other bodies and agencies of the United Nations system are involved in the development of integration legislation, tools, mechanisms and institutions. The UNESCO/UNEP International Environmental Education Programme (IEEP) stresses support for environmental education. A number of United Nations bodies and agencies carry out various training and awareness activities. UNEP and several United Nations bodies and agencies such as UNDP, UNIDO, ILO, and FAO, provide assistance to Governments on strengthening environmental legislation and institutional capabilities in their respective fields of competence. IFAD finances agricultural and rural development projects and programmes emphasizing environmental factors.

176. Co-ordination is ensured through, among others, (i) the ACC Ad Hoc Task Force on Long-Term Development Objectives; (ii) DOEM joint programming activities; and (iii) the Committee of International Development Institutions on Environment (CIDIE).

177. The following major activities are ongoing:

(a) Formulation and provision of policy, methodological and procedural guidance and training on how best to incorporate environmental objectives and factors into development decision-making and management (UNEP/UNDP/ECE/World Bank/DTCD);

(b) Inter-agency Project to Assist Countries Plan for Environmentally Sound Development (UNEP/UNDP/United Nations system);

(c) Co-operation with Governments in the Asian and the Latin American and Caribbean regions for integrating environmental and sustainability considerations into projects and into agro-economic management (UNDP/ESCAP/UNEP/ECLAC/Asian Development Bank);

(d) Promotion of environmental education involving, (i) International Environmental Education Programme (UNESCO/UNEP) focused on promoting the implementation of the International Strategy for Action in the Field of Environmental Education and Training for the 1990s and the incorporation of elements of the strategy into national plans and into the training of those responsible for national education and policy, (ii) implementation of recommendations of the Conference on Education for All (Thailand, March 1990), with regard to moving forward environmental literacy for all (UNESCO, UNDP, World Bank, UNICEF, UNEP);

(e) Human resource development programme to assist developing countries in building up coherent and sustainable systems for upgrading local technological skills and managerial and entrepreneurial capabilities (UNIDO, UNHCS/ILO) and environmental training and support programmes for employers' and workers' organizations (ILO/UNEP);

(f) United Nations Regional Commissions have organized (ECA-Kampala, June 1989, and ECE, Bergen, May 1990) or plan to organize (ESCAP-Bangladesh, October 1990; ECLAC-Santiago, 1990 and ESCWA) on regional conferences on the theme of sustainable development. The results from and follow-up of these conferences will form a significant input to the 1992 Conference. Another conference has been proposed for the African region in Egypt;

(g) Second United Nations Conference on the Least Developed Countries (Paris, September 1990), the 37th session of the Trade and Development Board (Geneva, October 1990) and the Eighth Session of the United Nations Conference on Trade and Development (Summer, 1991);

(h) UNDP's ongoing awareness workshops on Environment and Sustainable Development, which have so far involved representatives for 70 countries and several United Nations agencies. UNDP's Sustainable Development Network (SDN) linking the 113 field offices, as well as its Environmental Management Guidelines (EMG) and Environment Action Team (EAT);

(i) Sectoral regional co-operation networks to develop regional priorities and action plans, draft legislation and train specialized environmental personnel, including UNDP's grass-root/community level "Africa 2000 Network" with special emphasis on NGOs and women (TCDC/UNDP);

(j) Activities in the field of trade promotion in developing countries, development finance, commodities, and transfer of technology (UNCTAD);

(k) Ongoing review and development of environmental assessment procedures and guidelines within the United Nations system (co-ordinated by DOEM, CCSQ/OPS);

(l) Development of strategies and tools for integration of environment and sustainable development issues in agriculture, including forestry and fisheries (FAO).

178. Major activities requiring acceleration or enhancement are noted below:

(a) Developing countries require much more help to develop their own capacity in all these fields and should be further expanded in the fields of: (i) strengthening their national environmental machineries and establishing coherent, implementable national environment legislation, (ii) incorporating environmental education into educational systems, (iii) training in different fields of environment and natural resources development;

(b) Specialized capacity-building is required in developing sound guidelines for: (i) planning and management of human settlements, (ii) the preparation, adoption and initial implementation of national conservation strategies and the systematic inclusion of environmental factors in the process of development planning and implementation, and (iii) development of industrial management policies;

(c) Environmental accounting and methods to properly value natural resource and environmental costs should be pursued more vigorously.

179. Major gaps have been identified:

(a) Insufficient capability in organizations and in many countries, especially developing countries, for formulating and implementing environmentally sound development policies, and inadequate access of countries to the information and analysis of successful environmentally sound development policies, programmes and projects;

(b) Insufficient institutional capability at the international level to provide technical co-operation to developing countries on environmental planning and management, human resource development, institutional development and awareness building;

(c) Further strengthening, monitoring and co-ordination are required with regard to technical co-operation provided by the United Nations system for development of human resources, legislation and institutions and of public awareness in environmental management. Integration of environmental objectives in international economic co-operation activities, including, structural adjustment, economic recovery, stabilization, trade and international investment, should be ensured;

(d) Development of closer co-operation between development institutions and regulatory agencies on application of international standards.

B. Environmental monitoring and assessment

180. Decision-making on environment and development requires access to a wide variety of information. Environmental monitoring, environmental quality and development data provide the information base for proper environmental management and sustainable development.

181. The general objectives of the United Nations system are to: (i) obtain reliable and comparable scientific and technical information about environment and development issues, and develop and apply means of collecting, storing, retrieving and processing such information, making it available to decision makers and specialists, and (ii) provide comprehensive assessments of environment and development issues on the basis of socio-economic data and data on the major components and processes of the global and regional environments.

182. Various United Nations bodies and agencies participate in the Global Environment Monitoring System (GEMS), co-ordinated and supported by UNEP, including GEMS/GRID and the GEMS/MARC Environment Data Base. GEMS consists of several sectors, within which work is done with different United Nations agencies: climate-related monitoring (WMO, UNESCO), natural-resources-related monitoring (FAO, UNESCO), health-related monitoring (WHO, FAO), transboundary pollution (ECE, WMO), oceans (UNESCO, IOC, FAO, IMO, WMO, IAEA). UNESCO is involved with

generating scientific information on the marine, terrestrial and aquatic environment. DIESA analyses emerging socio-economic trends and problems and their effects on certain environmental matters. The Advisory Committee for the Co-ordination of Information Systems facilitates the co-ordinating of some information systems. Various United Nations information systems collect, classify and store environmental data.

183. One of the major ongoing activities is being carried out by UNEP, which will prepare a 1992 State of the Environment report - 20 Years after Stockholm, which will be made available to the preparatory process of the Conference. It will contain an overview of the main environmental issues, impact of development and socio-economic policies on the environment, environmental quality, human health and well-being, responses to changes in the environment, and challenges and future outlook.

184. UNESCO has proposed to heads of United Nations bodies and agencies that joint statements on the environment be prepared, addressing selected major global environment problems and their consequences for development, and combining the scientific information and policy options available at the international level on the issues selected. The first statement is planned for 1991.

185. Among the major activities requiring acceleration or enhancement are the following:

(a) Provision of assistance to developing countries must be expanded for enhancing monitoring and assessment capabilities;

(b) Preparation of assessments of selected environmental indicators should be accelerated;

(c) Preparation of a convention on environmental impact assessment in a transboundary context (ECE) (see sect. C (3) below).

186. The major gaps are as follows:

(a) Monitoring stations or activities are insufficient, in number and in geographical distribution. Monitoring and assessment procedures require further improvement and harmonization. Techniques to relate environmental data to changing economic and social changes should be developed;

(b) Improved and more balanced access to environmental information systems and environmental data, especially by developing countries, should be facilitated;

(c) Provision of early warning of significant changes in the environment should be ensured.

C. Promotion of international environmental law

187. Management of regional and global environmental questions requires internationally concerted efforts, often achieved through the enactment and implementation of international environmental law which protects the national resources from pollution, natural resource degradation and harm to human health.

188. The general objectives of the United Nations system are to assist countries to enact and implement international environment law in a timely manner, as required, to support environmental management and protect human health and well-being.

189. The following major activities are ongoing:

(a) Current activities related to the Montreal Protocol for Protection of the Ozone Layer, climate change, hazardous wastes and biodiversity, as described in chapters I, VII and V;

(b) Monitoring the status of the application of existing environmental treaties; assessment and study of problems preventing States from becoming parties to or implementing environmental treaties; consultation with Governments with regard to the types of technical co-operation or international programmes required to support their application (UNEP with other United Nations bodies and agencies/depositaries of agreements/regional commissions);

(c) Preparation of a legal instrument on transboundary impacts of industrial accident (ECE) (see also sect. B above and chap. X);

(d) Preparation of an international convention on liability and compensation for the transport of hazardous and noxious substances by sea, in 1992-1993 (IMO).

190. Certain major activities require acceleration or enhancement; for example:

(a) Countries, especially developing countries, face a variety of technical and financial needs to enable them to implement international environmental legal instruments;

(b) Review and strengthening of the international régime on liability for nuclear damage (IAEA).

191. The two major gaps regarding international environmental law are:

(a) Insufficiency in technical co-operation activities, especially for developing countries, to enhance national capabilities to participate in international negotiations of international law and instruments, and to implement them at the national level;

(b) Development of general principles and obligations of States in the field of development needs to be undertaken. This exercise should draw on, among others, existing agreed legal instruments and the work of the WCED Expert Group on Environmental Law.

D. Promotion of international technology transfer

192. Technology transfer and access to knowledge of its use is essential to resolving many environment and development problems. Technology must be appropriate, available and affordable. The developing countries, especially, require technology for development purposes, but also for environmental protection. And increasingly they need new technologies to address sustainable development problems and the new and emerging global problems such as ozone, climate change and biological diversity. In the case of global issues, many of the technologies, but not all, are in the hands of private companies, so new approaches to technology transfer must be explored and found. In addition to the established means of promoting technology transfer, new measures are being explored, for example, under the Montreal Protocol on ozone and the IPCC's climate change work.

193. The United Nations system is working with Governments to find ways and means to secure better and environmentally sound technologies for environmental protection and development. A number of organizations, including UNDP, the ILO, UNIDO, WMO, WHO, UNCTC, ECE, CSTD, WIPO and UNEP, work in this area.

194. In addition to the efforts mentioned above, Governments are considering technology needs for addressing environment development issues in the (i) negotiations on the Montreal Protocol, where technology transfer is essential for developing country participation, (ii) the Basel Convention on Hazardous Wastes, and (iii) the proposed convention on climate change within the framework of the Intergovernmental Panel on Climate Change (IPCC).

195. Certain activities require acceleration or enhancement. There is a major need to expedite ongoing work in technology transfer, as especially exemplified by the needs of sustainable development and the new global environmental issues.

196. Moreover, as the current concerns over sustainable development and global environmental issues suggest, there are long-standing, and special and urgent new needs to devote renewed attention to making available, particularly to developing countries, technology in a great many fields. Technologies that are limited by patents or other commercial arrangements require co-operation with industry.

E. International funding for sustainable development

197. The increased concern about and need to integrate environment and development to achieve sound economic growth will have additional costs which will require funding that is additional to the massive investments required to meet the urgent economic and social objectives of developing countries to alleviate poverty. Family planning, combating hunger, protecting national resources, preventing pollution, addressing ozone layer depletion, preventing climate change, and managing urban growth will require greater funding. These costs can run very high - family planning to $10.5 billion annually; elimination of ozone-depleting chemicals from $2 billion to $7 billion over a decade. Protecting tropical forests, species, water, soil and air will be much more. Rich countries may have the ability to consider these costs; developing countries with stable assistance

revenues, heavy debt payments, falling export revenues and accelerating natural resource destruction do not. The need to act to promote sustainable development and address global problems makes additional funding essential, especially for developing countries.

198. The United Nations system seeks to secure adequate flows of funds for environmentally sound development at national, regional and global levels. The World Bank, IFAD and the regional development banks, specialized agencies, UNDP and other organizations contribute funding for sustainable development activities in their programmes or through special programmes such as the tropical forestry action plans, the regular and special programmes for Africa and the like.

199. Out of UNDP-funded ongoing projects executed within the United Nations system, some $300 million were directly environment related. An additonal $100 million was approved for new environment projects in 1989. These funds are clearly insufficient. In addition to the above, consideration of additional funding for sustainable development is taking place within (i) the Project for International Conservation Financing, carried out by the UNDP, World Resources Institute and others, (ii) the Montreal Protocol's open-ended working group on means to enable developing countries to participate further in the Protocol, (iii) the Intergovernmental Panel on Climate Change to enable developing countries to participate in its activities, (iv) the World Bank, UNDP and UNEP's consideration of a global environmental facility and (v) IFAD's analysis of modalities of a "financial mechanism" to net additional concessional resources for environmental elements of IFAD projects, available in January 1991.

200. The World Food Programme aid components promoting environmentally sustainable development were equivalent to about $300 million per year, covering activities in the areas of agricultural and rural development, health and improvement of the quality of life.

201. As indicated in earlier chapters, Governments, especially in the developing countries, require additional financial resources to carry out current development/environment activities, new activities for sustainable development and to meet added global environmental requirements, such as ozone layer depletion, climate change, loss of biodiversity, and hazardous wastes.

202. Consideration of financial mechanisms to fund facilities in developing country ports for receiving wastes from ships.

203. There is a great shortage of financial flows to developing countries, in particular for environmental protection, sustainable development and participation in global issues. New means should be found for additional dedicated sustainable development funds in development assistance organizations and lending institutions, new funding means and facilities, mechanisms for obtaining private funding, and co-financing from public and private sources.

204. Ways to reduce the debt burdens of developing countries for sustainable development purposes are needed and other non-traditional funding mechanisms such as users' fees should be explored.

UNITED
NATIONS

A

General Assembly

Distr.
GENERAL

A/CONF.151/PC/7
18 June 1990

ORIGINAL: ENGLISH

PREPARATORY COMMITTEE FOR THE UNITED
NATIONS CONFERENCE ON ENVIRONMENT
AND DEVELOPMENT
First session
Nairobi, 6-31 August 1990
Item 2 (c) of the provisional agenda*

PREPARATIONS FOR THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT ON THE BASIS OF GENERAL ASSEMBLY RESOLUTION 44/228 AND TAKING INTO ACCOUNT OTHER RELEVANT GENERAL ASSEMBLY RESOLUTIONS: RECENT ACTIONS OF INTERGOVERNMENTAL AND OTHER BODIES OF RELEVANCE TO THE PREPARATORY PROCESS

Summary of activities of intergovernmental and international organizations relevant to General Assembly resolution 44/228

Report of the Secretary-General of the Conference

1. The secretariat of the United Nations Conference on Environment and Development asked a variety of international organizations to provide it with information on the activities they carry out which are relevant to the Conference. This paper provides a brief indication of the types of activities in which those organizations are engaged. The intention is to provide a general picture of the range of activities at the international level that are relevant and might contribute to the preparatory process. It should be noted that the information received from United Nations entities that did not participate in the second round of preparations for the overview of system-wide activities and from other organizations that are not among the Designated Officials for Environmental Matters has been included. The secretariat will have this information available for reference in original languages in Nairobi.

---

* A/CONF.151/PC/4.

A. United Nations offices and agencies

1. United Nations Office for Ocean Affairs and the Law of the Sea

(a) Promotion of uniform application of the provisions of the Convention on the Law of the Sea;

(b) Dissemination of information on marine scientific research and marine environmental law and policy;

(c) Expert group on sea-use planning and coastal area management;

(d) Dissemination of information on hazardous technologies and cleaner and safer alternatives to them.

2. Department of International Economic and Social Affairs

(a) Research on and analysis and monitoring of world economic development, including statistical, population, energy and natural resources studies (Global Input/Output Model);

(b) Research on the relationship between patterns of consumption, resource use and choice of technologies;

(c) Collection, analysis and dissemination of information on transport policy issues, transport technologies and legislation;

(d) Working groups on the interrelation of poverty, environmental degradation and development objectives;

(e) Monitoring, data collecting and reporting on multilateral, bilateral and other programmes in new and renewable energy sources;

(f) Policy-oriented research on the use of water resources;

(g) Collecting environmental statistics, doing in-depth methodological work and undertaking case studies in natural resource accounting.

3. United Nations Centre on Transnational Corporations

(a) Promotion of the establishment of a voluntary environment fund supported by transnational corporations;

(b) Technical co-operation for the development of operational principles for the disclosure of risk information;

(c) Technical co-operation for the transfer of environmentally sound technologies.

4. Department of Technical Co-operation for Development

(a) Technical assistance for reducing fossil-fuel and other emissions and improving efficiency in fuel use;

(b) Technical assistance for the formulation of alternative development strategies for the planning and management of water resources, including river basins;

(c) Development of ground-water software and the improvement of hydrogeological data bases;

(d) Technical assistance for protecting marine and coastal environments and restoring of polluted lakes and municipal water systems;

(e) Technical assistance for the treatment and disposal of hazardous and toxic wastes.

5. Centre for Science and Technology for Development

Research and the dissemination of information on biotechnology for food production, energy use, technology for controlling desertification and financing of environmentally sound technologies.

6. United Nations Centre for Human Rights

Monitoring of and dissemination of information on environmental problems and their relation to human rights.

7. Economic and Social Commission for Asia and the Pacific

(a) Ministerial-level Conference on the Environment in Asia and the Pacific, scheduled to be held at Bangkok, 10-16 October 1990;

(b) Dissemination of scientific information on the regional implications of global environmental problems;

(c) Strengthening regional government and the technical capabilities of non-governmental organizations in combating desertification and promoting afforestation, social forestry and arid land management;

(d) Promoting environmentally sound management of critical ecosystems, including training activities;

(e) Technical assistance, advisory services and training in coastal environmental management;

(f) Generation and dissemination of information on hazardous wastes and systems for waste disposal, especially in regard to coastal water pollution.

8. Economic Commission for Latin America and the Caribbean

(a) Regional conference to be held in Mexico, tentatively scheduled for May 1991;

(b) Technical assistance in the design and implementation of integrated environmental management programmes for agricultural development in mountain areas with a view to controlling deforestation and desertification;

(c) Promotion of capacity-building in the field of environmental management especially in agricultural development programmes, including analytical tools such as natural-resource valuation at the local level;

(d) Promotion of capacity-building in industrial and municipal waste management (technical assistance and training);

(e) Technical assistance in sea-use planning and coastal area management, especially in the context of the Action Plan of the South East Pacific;

(f) Promotion of capacity-building in the assessment of environmental impact.

9. Economic Commission for Africa

(a) Regional Conference to be held in Egypt, tentatively scheduled for the first quarter 1991;

(b) Technical assistance and advisory services for the development of integrated energy policies, for combating desertification, deforestation and drought;

(c) Technical assistance to member States for environmentally sound management of regional seas, coastal areas and fresh-water resources;

(d) Technical assistance for the implementation of environmental protection aspects of the Second Industrial Development Decade for Africa, particularly in regard to pollution control and the movement of hazardous and toxic wastes.

10. United Nations Institute for Training and Research (UNITAR)

(a) Training programmes in environmentally sound technologies;

(b) Promotion of public domain and low-cost technology.

11. United Nations University

(a) Ongoing research programmes on the human dimensions of global/environmental change; energy, technology and environment; sustainable development of humid tropics; and mountain ecology and sustainable development;

(b) Research on the economics of environment and development, including the legal framework for environmental economics, accounting for environmental degradation and the development of general equilibrium models.

12. International Civil Aviation Organization

(a) Standing Committee on Aviation Environmental Protection;

(b) Research on technologies leading to the reduction of noise and emissions.

13. World Intellectual Property Organization

(a) Analysis of the role of industrial property in technology transfer in regard to the Montreal Protocol on Substances that Deplete the Ozone Layer (jointly with UNEP);

(b) Promotion of inventive efforts useful to environmental protection in Africa.

B. Other intergovernmental bodies

1. Inter-American Development Bank

(a) Classification and evaluation of the environmental impact of the Bank's operations;

(b) Training and guidelines for environmental assessment;

(c) Co-operative arrangements with Governments, multilateral organizations and non-governmental organizations regarding environmental matters;

(d) Technical assistance and training in environment and natural resources management;

(e) Technical co-operation projects dealing with the management of river basins, watershed and sewer systems, forest resources and fisheries;

(f) Commission for Latin America and the Caribbean on Development and Environment (jointly with UNDP);

(g) Environment and Natural Resources Action Programme.

2. Organisation for Economic Co-operation and Development

(a) Research programme on strengthening the capacity of the institutions of the least developed countries (national, local and non-governmental) in environmental management and the regulation of economic instruments applied to the sustainable development of developing countries;

(b) Environmental education;

(c) Review of technology transfer mechanisms as related to global environmental problems.

3. Organization of American States

(a) Integrated regional development planning efforts, including studies on environmental impact;

(b) Support to regional research programmes on oceanography, desertification, endangered ecosystems, tropical rainforests, and alternative energy sources.

4. General Agreement on Tariffs and Trade

Working Group on Domestically-prohibited Goods and Other Hazardous Substances, to report its findings to the GATT Council by 30 September 1990.

5. Council of Europe

(a) Convention on the Conservation of European Wildlife and Natural Habitats;

(b) Soil protection feasibility studies;

(c) Soil pollution by heavy metals;

(d) Studies and research on deforestation;

(e) Protection of genetic heritage.

C. Other international organizations

1. Stockholm Environment Institute

(a) Agro-biotechnology Research Programme;

(b) Climatic Change Assessment and Policy Development Programme;

(c) Energy Futures Research Programme;

(d) Research on economics, ethics and environmental value.

2. International Union of Biological Sciences

(a) Biological Diversity Programme;

(b) Decade of the Tropics Programme;

(c) Bio-Indicators Programme.

3. Caribbean Conservation Association

Regional Plant Conservation Programme (biological diversity).

4. International Association of Hydrological Sciences

(a) Working Group on Atmosphere/Soil/Vegetation Relations;

(b) Working Group for Global Energy and Water Balance Experiments;

(c) Working Group on Global Change.

5. International Board for Plant Genetic Resources

(a) Development of and support to national agricultural research programmes;

(b) Research programmes in seed conservation, *in vitro* cultures, plant pathology and quarantine and genetic diversity.

6. International Institute for Environment and Development

(a) State-of-the-art reviews of forestry, agriculture and land use in the humid and arid tropics; environmental economics; implications of climate change for the South; and living and working environments of the poor in urban settings.

7. World Conservation Union

(a) Environmental impact assessment of climate change;

(b) Tropical Forest Programme;

(c) Sahel Programme;

(d) Strategy for the Conservation of Global Biological Diversity;

(e) Secretariat for Botanic Gardens Conservation and Management of Protected Areas and National Parks;

(f) Species Conservation Programme;

(g) Coastal and Marine Programme;

(h) Wetlands Programme.

8. Intergovernmental Authority on Drought and Development

Conference on Environmental Protection and the Development of a Sub-regional Strategy to Combat Desertification, to be held at Kampala, on 24-28 September 1990.

9. International Council for the Exploration of the Sea

The Council stated that its actions are probably not relevant to preparatory process.

UNITED
NATIONS

A

General Assembly

Distr.
GENERAL

A/CONF.151/PC/8
20 June 1990

ORIGINAL: ENGLISH

PREPARATORY COMMITTEE FOR THE UNITED
NATIONS CONFERENCE ON ENVIRONMENT
AND DEVELOPMENT
First session
6-31 August 1990
Item 2 (d) of the provisional agenda*

PREPARATIONS FOR THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT ON THE BASIS OF GENERAL ASSEMBLY RESOLUTION 44/228 AND TAKING INTO ACCOUNT OTHER RELEVANT GENERAL ASSEMBLY RESOLUTIONS: PREPARATIONS AT THE NATIONAL LEVEL: GUIDELINES FOR NATIONAL REPORTS

Suggested guidelines for the preparation of national reports

Report of the Secretary-General of the Conference

INTRODUCTION

1. The Preparatory Committee for the United Nations Conference on Environment and Development, in decision II of its organizational session, requested the Secretariat to prepare detailed guidelines on the preparation of national reports for submission to the Committee at its first session. Those guidelines are presented below.

2. The Conference, in co-operation with the United Nations Development Programme and other multilateral and bilateral donors, will endeavour to respond to requests from developing countries for technical assistance in preparing their national reports.

3. The main purpose of national reports is to present the national perspectives and experience of Member States, together with information on policies, activities and issues at the national level which will assist the Conference in meeting its objectives as established in General Assembly resolution 44/228.

---

* A/CONF.151/PC/4.

I. OVERALL APPROACH

4. National reports should provide basic information on the existing situation in the country in terms of the interactions between the development process and the environment. They should focus on the strategic actions that are being carried out and/or planned, and their policy implications. They should give particular attention to areas in which environmental considerations interact with development goals and the development process, the constraints and opportunities arising from such interactions and the manner in which they are managed at all levels of society - especially at the levels of economic and sectoral policies and their implementation.

5. Key procedures for addressing resource and environmental problems through legislation, policies, strengthening of institutions, education, public awareness, policy analysis, resource accounting and related requirements for technologies and funding should be identified. Of special importance is the identification of areas in which environmental and developmental issues at the national level affect, and are affected by, international conditions at the regional and global levels - areas which might be addressed by the Conference when considering international measures in support of national action to address those issues.

6. In order to ensure that the preparations for the Conference take fully into account the progress made at the national level since 1972 and address the concerns and interests of Member States, it is important that national reports provide relevant background information concerning problems that have emerged since 1972 and the progress made in dealing with them.

II. SUGGESTED PROCEDURES

7. While each country will adopt its own procedures for preparing national reports, it should include provision for the following:

(a) The establishment of a special committee or working group for preparing the national report. The group could be the same as, or closely related to, the group charged with national preparations for the Conference. It could be comprised of representatives of governmental ministries and agencies at various levels, including the local and municipal levels. In States of a federal character, it could include regional and provincial governments, representatives of the non-governmental community - industry, trade unions, science - and other important constituencies such as women, youth, consumers and indigenous peoples. Participants might include experts in key disciplines such as natural and social sciences, economics, policy analysis, planning and resource management, and in areas such as energy, agriculture and urban affairs.

(b) The utilization, as a source of reference, of information available from recent reports such as country environmental profiles, environmental action plans, tropical forest action plans, national conservation strategies, state of the environment reports, national development plans, sector strategies and assessments reports and strategies of international agencies and funding organizations and other research and policy reports.

III. DRAFT OUTLINE FOR NATIONAL REPORTS

8. In order to facilitate the utilization of the national reports in the preparatory process, it is proposed that they conform to the following format and include the kinds of information referred to below.

A. Executive summary

9. Summarize the principal findings and conclusions of the report, highlighting the interrelationships between environment and development.

B. Development trends and environmental impacts

10. Describe developmental trends in terms of economic growth, demographic development, resource use and conservation, equitable distribution of income and wealth, the role of the international economy (trade, finance, debt) etc. Sectors might include mining, energy, transportation, housing and infrastructure, industry, health and social services, education, environment, agriculture, parks and tourism, forestry and fisheries, economic planning and foreign affairs.

11. Describe the basic environmental and natural resource endowment of the country including land use and land cover; and the extent and use of croplands, pasture, forest range, fresh-water fisheries, coastal resources, biological diversity, minerals, energy, and other natural resources. Include references to transboundary and shared resources and include pertinent information on the amount of resources and extent of change and rates of change. Analyse the importance of natural resources in the recent economic development of the country in question such as: How dependent is the country on natural resources (consumptive and nonconsumptive use) measured in terms of production, employment, trade, quality of life, and other factors? How has this dependency changed over the past two decades? How is it likely to change in the next decade? How adequate is the basic environmental and natural resource endowment in relation to present and anticipated levels of population, rates of population growth and distribution and the standards and conditions of life to which the people of the country aspire?

12. Identify and analyse key environmental and natural resource issues that are of major concern to the country. Where possible, the issues should reflect those identified in paragraph 12 of General Assembly resolution 44/228. For each issue, identify present conditions and trends, major causes, the relative importance or the degree of urgency, the level of risk, the degree of irreversibility, the impact and economic significance, and, if possible, distributional aspects - who is affected most by pollution and resource degradation. These should be described and analysed at the national level, incorporating information, including the best available statistical indicators, from the sub-national and transnational levels, as appropriate. Reference should be made to any environmental emergencies or catastrophes that may have arisen in the country and the means that have been established to anticipate, prevent and deal with them.

13. In the analysis of major causes, examine the part played by, inter alia, the demand side (levels of per capita consumption, population growth), inappropriate production technologies, policy distortion that encourages unsustainable use of resources and the excessive use of the natural environment for waste disposal, gaps in the institutional and legal framework and lack of knowledge and awareness.

C. Response to environment/development issues

14. Outline the major approaches that have been developed and implemented at the national level over the past two decades to address environmental and resource problems as they relate to development, and indicate the principles that guide policy, the key goals, targets and priorities of development, and the policies, legislation and institutions that enable their achievement, taking into account environmental and sustainability considerations. Describe programmes, projects and other actions, indicating what progress has been made and what remains to be done. Indicate which critical events (social, economic, ecological, etc.) have led to changes in awareness, institution-building, or action, and their results.

1. Principles and goals

(a) Principles guiding action: e.g., polluter pays principle, internationalization of environmental costs; effect-oriented policy measures; emission-oriented policy measures; resource-efficiency measures; structural source-orientated measures;

(b) Goals and targets: sustained use of renewable resources: water, forests, living resources, arable land etc.; pollution prevention, pollution control, impact mitigation; reduction in greenhouse gas emissions; toxic chemicals and hazardous substance management etc.

2. Policies, legislation and institutions

(a) Financing sustainable development; analysis of costs and benefits of incorporating environmental dimension into development; financing needs and constraints and how they are or may be met;

(b) Institutional development policies such as the establishment of new departments or councils on the environment; establishment of rules and regulations and enforcement procedures; preparation of national environmental reports and strategies etc.;

(c) Policy measures to ensure correct valuation of environmental impact, discourage over-exploitation of natural resources and encourage resource conservation and rehabilitation;

(d) Policy and other measures to strengthen scientific, research and technological capacities and their application and adaptation to the country's environmental and development needs;

(e) Private initiative policies and practices of business and parastatal organizations, trade unions, national industrial associations, establishment and programmes of non-governmental organizations and religious and cultural organizations; the role of women, youth, indigenous peoples and other important interest groups.

3. Programmes and projects

(a) Programmes and projects: the extent and type of activities undertaken to protect the environment and manage natural resources; effectiveness; measures of success;

(b) Programmes, projects and other activities of specific groups: economic and planning agencies; sectoral agencies and departments; the international development and environment community; donors; regional organizations; indigenous peoples, others;

(c) Promotion of public awareness and public education;

(d) Research, policy analysis and training: universities, institutes, businesses (on-the-job training), international institutes, non-governmental organizations, others;

(e) Evaluating and reorienting development; environmental monitoring, indicators, networks and others;

(f) Programmes on training, education and public awareness.

15. Indicate how best the international community can address environmental and development issues of direct concern to the country. Among the available means that could be considered are:

(a) Treaties and conventions and other legal measures;

(b) Policies and practices of major economic institutions: structural adjustment, debt restructuring, trade reform (GATT), others;

(c) Policies and practices of major international and multinational corporations: training, technology, transfer, code of good practices, investments, regulations, others;

(d) Financial assistance: World Bank and regional banks, bilateral donors, businesses, private foundations, others;

(e) Technological innovations and technology transfer: access to information, technology, training, others;

(f) International training and research facilities;

(g) United Nations and specialized agency assistance and support.

D. Procedures to be followed in preparing national reports

16. Information should be provided on the procedures actually followed in preparing the national report, including:

(a) The organization specifically responsible for preparing the report;

(b) Government ministries, departments and agencies contributing to it;

(c) The approval process: At what level was it approved (ministerial?, Cabinet? other)?

(d) Contributions of non-governmental organizations - industry, trade unions, science, women, youth, grass-root citizen groups, indigenous peoples etc.;

(e) Public dialogue: Were public hearings held or other opportunities provided for public discussion of the report?

E. Anticipated results of the Conference

17. Indicate what results your country expects from the Conference.

UNITED NATIONS

A

General Assembly

Distr.
GENERAL

A/CONF.151/PC/9
22 June 1990

ORIGINAL: ENGLISH

PREPARATORY COMMITTEE FOR THE
UNITED NATIONS CONFERENCE ON
ENVIRONMENT AND DEVELOPMENT
First session
6-31 August 1990
Item 2 (f) of the provisional agenda*

PREPARATIONS FOR THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT ON THE BASIS OF GENERAL ASSEMBLY RESOLUTION 44/228 AND TAKING INTO ACCOUNT OTHER RELEVANT GENERAL ASSEMBLY RESOLUTIONS: ARRANGEMENTS FOR THE EFFECTIVE CONTRIBUTIONS OF RELEVANT NON-GOVERNMENTAL ORGANIZATIONS IN THE PREPARATORY PROCESS

Suggested arrangements for involving non-governmental organizations in the preparatory process

Report of the Secretary-General of the Conference

I. BACKGROUND

1. In resolution 43/196, the General Assembly requested the Secretary-General to obtain the views of relevant non-governmental organizations on the objectives, content and scope of the United Nations Conference on Environment and Development and to submit those views to it at its forty-fourth session. In resolution 44/228, the General Assembly invited all States, inter alia, to take an active part in the preparations for the Conference to prepare national reports, as appropriate, to be submitted to the Preparatory Committee in a timely manner and to promote international co-operation and broad-based national preparatory processes involving the scientific community, industry, trade unions and concerned non-governmental organizations. In the same resolution, the General Assembly also requested relevant non-governmental organizations in consultative status with the Economic and Social Council to contribute to the Conference, as appropriate.

---

* A/CONF.151/PC/4.

2. In paragraph 33 of his report to the organizational session of the Preparatory Committee, the Secretary-General stated that the community of non-governmental organizations had an extensive network and keen interest in a wide range of environmental issues. He observed that it could enrich and enhance the deliberations of the Conference and its preparatory process. It could also serve as an important channel for the dissemination of conference results and mobilize public support for strengthened environmental policies at the national and international levels. The Secretary-General thus considered it important that non-governmental organizations participate effectively in the Conference and its preparatory process.

3. In decision I, adopted at its organizational session, the Preparatory Committee decided to hold regional conferences on environment and development in all regions and to integrate the results of those conferences into the preparatory process for the Conference. In decision II, the Preparatory Committee took note of the Secretariat's suggestions for guidelines for national participation. One suggestion was that broad-based national committees of an advisory nature, including representatives of relevant ministries, scientific and technical institutions, non-governmental organizations, industry, business and various interest groups, should be established. The role of the committees might be to create public awareness of the Conference, further interest in its preparations and provide a focal point for the assimilation of the views and experiences of the various environment and development constituencies at the national level; to have an impact on various regional and other specific preparatory meetings; and to advise Governments on the preparations of national reports. In decision IV, the Preparatory Committee decided that the secretariat should submit to it at its first session suggested arrangements for involving non-governmental organizations in the preparatory process for the Conference.

4. In proposing such arrangements, the secretariat has taken account of the Ministerial Declaration from the Regional Conference on Action for Our Common Future, organized at Bergen, Norway, from 14 to 16 May 1990 by the Government of Norway, in co-operation with the Economic Commission for Europe (ECE). The Commission notes that the Ministers had the benefit of a preparatory process that included, as full partners, the representatives of a wide cross-section of groups in society, including industry, scientists, trade unions, voluntary environmental organizations and youth.

5. The secretariat is mindful of the constructive contributions previously made by non-governmental organizations to such relevant initatives as the Law of the Sea, the International Code of Conduct on the Distribution and Use of Pesticides, the Special Programme of Action for Africa, the London Guidelines for the Exchange of Information on Chemicals in International Trade, the Global Convention on the Control of Transboundary Movements of Hazardous Waste and the formulation of strategies for the fourth United Nations development decade.

II. PROPOSALS FROM NON-GOVERNMENTAL ORGANIZATIONS

6. The secretariat has also taken note of proposals from non-governmental organizations, including:

(a) Proposals from a working group of the NGO Development Committee, New York, a standing committee of the Conference of Non-governmental Organizations in Consultative Status (CONGO), that national committees should be established in accordance with resolution 44/228 which encourage and assist the participation of all interested non-governmental organizations, that regional conferences and working groups on the environment and development should ensure the participation of a broad spectrum of non-governmental organizations and make use of their regional expertise, and that non-governmental organizations in consultative status to the Economic and Social Council and others with special interest in the subject matter of the Conference be invited to participate fully in it and its preparatory meetings;

(b) Proposals from a meeting of representatives from 115 non-governmental organizations from 40 countries, held in Vancouver, Canada, from 16 to 18 March 1990, transmitted to the Secretary-General of the Conference on 28 March 1990 by the Centre for Our Common Future;

(c) Recommendations from a meeting of the principal officers of 81 non-governmental organizations and institutions from 32 countries, including 16 developing countries, convened by the Centre for Our Common Future at Nyon, Switzerland, from 3 to 6 June.

III. RECOMMENDED ARRANGEMENTS FOR INVOLVING NON-GOVERNMENTAL ORGANIZATIONS

7. In view of the above proposals and in the context of General Assembly resolutions 43/196 and 44/228, the secretariat recommends the following arrangements for involving non-governmental organizations in the preparatory process for the United Nations Conference on Environment and Development.

A. National level

8. At the national level, a cross-section of groups in society, including scientific and technical institutions, industry, trade unions, women's and youth organizations, and non-governmental organizations concerned with environment and development, should be encouraged to participate in a broad-based preparatory process aimed at creating public awareness of the Conference, furthering interest in its preparations, gathering people's views and experiences on environment and development matters, facilitating the preparation of national reports, and promoting international understanding and co-operation.

9. Non-governmental organizations may make their contributions to the national preparatory process by participating in such consultations and conferences as may

be convened by the Government, participating in national advisory committees if those are established, contributing to the preparation of the national reports, contributing to national preparations for regional conferences, and in other ways. They should also be encouraged to contribute through appropriate activities additional to the official processes, including activities that generate public support for and understanding of issues to be addressed by the Conference.

B. Regional level

10. At the regional level, non-governmental organizations, broadly defined, may be invited to contribute to preparations for the regional conferences on environment and development and to their deliberations, in ways that the regional commissions determine to be appropriate. The contributions may include participating in preparatory committees, consultations, hearings, and other activities leading to or related to their regional conference; preparing papers on issues to be considered at the regional conference; and participating in a non-voting capacity in the deliberations of the regional conferences, particularly in respect to matters on which they have special competence. Non-governmental organizations, especially regional bodies and associations, should also be encouraged to carry out appropriate regional activities additional to official processes which contribute to preparations for the Conference.

C. Global level

11. At the global level, non-governmental organizations may contribute to the preparatory process by providing information and counsel on matters of special relevance to the non-governmental community, to the Preparatory Committee, its working groups and the Conference secretariat.

D. Suggested procedures for the participation of non-governmental organizations in intergovernmental meetings

12. It is recommended that non-governmental organizations with consultative status with the Economic and Social Council and others with special competence in the area under consideration be encouraged to contribute through papers and presentations, as appropriate, to the substantive work of the Preparatory Committee and its working groups, and to speak at meetings of them on matters related to their special competence, at the discretion of the Chairman and with the consent of the Preparatory Committee or the working group, as the case may be.

13. The Preparatory Committee might also wish to decide to adopt a procedure by which it and, as appropriate, its working groups, at each future session, would include, at an early stage of the session, an informal dialogue meeting with non-governmental organizations, lasting at least half a day. The Preparatory Committee might also wish to recommend that other United Nations agencies, organizations and programmes adopt a similar procedure in intergovernmental meetings devoted to preparations for the Conference.

14. In facilitating such participation by non-governmental organizations, the Preparatory Committee and its working groups may wish to take into account the desirability of providing, to the maximum extent possible, that such participation be of a broadly representative character with an appropriate and equitable balance in the representation of various regions and in the orientation and competence of the organizations in respect of environment and development, with particular regard to the need to ensure the full participation of developing country organizations, including grass-roots organizations.

15. The Conference secretariat should encourage and support appropriate actions in addition to the official process which support the Conference and its preparatory process. That may involve providing and disseminating information on preparations for the Conference, consultations, and supporting efforts by the non-governmental organizations to communicate and co-operate so that they may contribute effectively to the preparatory process.